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Undergraduate Gazette

1995-1994

This bulletin contains announcements of courses for the academic year 1993-94. IUP reserves the right to repeal, change, or amend the rules, regulations, courses, and programs contained in this bulletin at any time. Tuition and fees are also subject to change.

According to IUP's Mission Statement, "...The university community must be supportive of and open to all scholars regardless of race, religion, creed, age, sex, disability, or ethnic heritage..." Full participation from each member of the university community in activities that support this mission is encouraged. Each member of the university community has a right to study and work in an environment free from any form of racial, ethnic, and sexual discrimination. In accordance with federal and state laws, the university will not tolerate racial or ethnic discrimination or discrimination on the basis of disability.

IUP is committed to providing leadership in taking affirmative action to attain equal educational and employment rights to all persons without regard to race, religion, national origin, ancestry, sex, physical handicap, or affectional or lifestyle preference. This policy is placed in this document in accordance with state and federal laws including Titles VI and VII of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, and the Americans With Disabilities Act, as well as federal and state executive orders. This policy extends to disabled veterans and veterans of the Vietnam era. Please direct inquiries concerning equal opportunity and affirmative action to the following administrators:

Management and University Concerns:
Dr. Cynthia Cronk
Director, Human Resources
G-30 Sutton Hall, IUP, Indiana, PA 15705

Faculty Concerns:
Dr. Alphonse A. Novels
Assistant Provost and Director of Minority Affairs
359 Sutton Hall, IUP, Indiana, PA 15705

Student Concerns:
Ms. Linda Hall
Assistant Vice President for Student Affairs
215-A Sutton Hall, IUP, Indiana, PA 15705

TD: Telecommunications Device available in the:
Advising and Testing Center, (412) 357-4067
(VTTD) (8:00-4:30, M-F)
Office of Human Resources, (412) 357-2481
(TD) (24 hours)

University Calendar

Fall Semester, 1993

Registration	Aug. 31
Classes begin	Sept. 1
Labor Day (no classes)	Sept. 6
Thanksgiving recess begins at end of night classes	Nov. 23
Classes resume (8:00 a.m.)	Nov. 26
Reading Day	Dec. 14
Final exams	Dec. 15-22

Spring Semester, 1994

Registration	Jan. 17
Classes start	Jan. 18
Spring vacation starts/p.m.	Mar. 5
Classes resume (8:00 a.m.)	Mar. 14
Easter	Apr. 3
No classes	Apr. 4
Monday classes held	Apr. 5
Reading Day	May 4
Final exams	May 5-12
Commencement	May 14

Summer sessions, 1993

First session registration	June 7
First session classes begin/p.m.	June 8
First session ends	July 9
Second session registration	July 12
Second session classes begin/p.m.	July 13
Second session ends	Aug. 13

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Indiana University of Pennsylvania Bulletin

1993-94 Undergraduate Catalog

IUP
Indiana, Pennsylvania 15705

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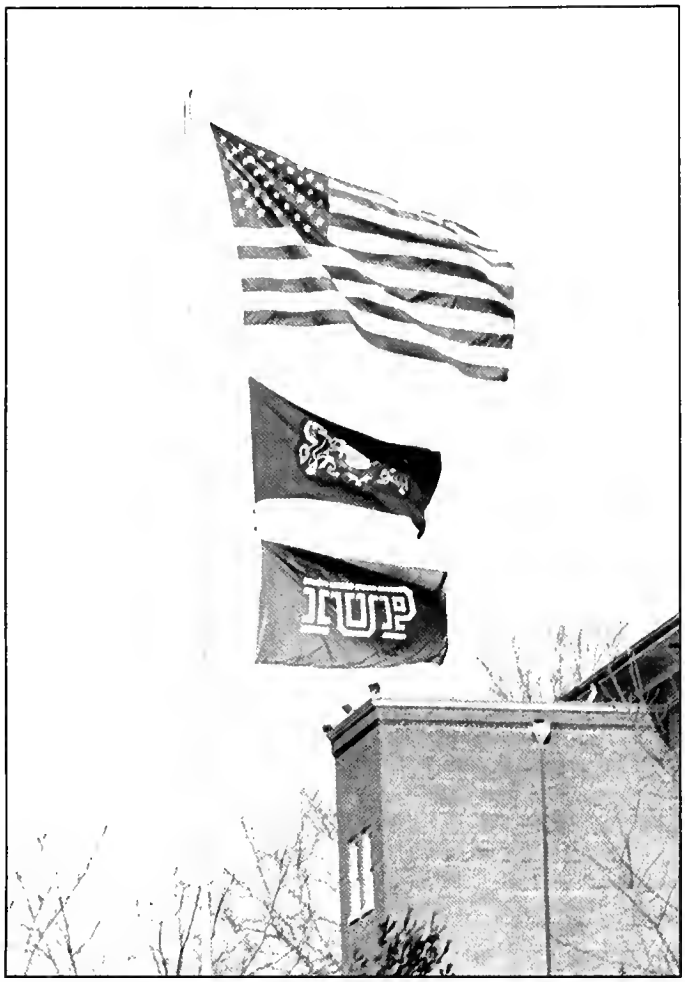


The University

A University Education

As an institution of higher learning, IUP is a community of scholars of both faculty and students, committed to discover, preserve, and impart truth in all its forms. Our primary concern is with the intellectual, moral, cultural, physical, social, and aesthetic development and maturation of our students. To this end we are charged with providing a liberal education of both general and specialized studies which will allow our students to liberate themselves from narrow interests and prejudices, to broaden their intellectual horizons by increased cultural perspective, to develop the ability to think logically, critically, and creatively, and to communicate their judgments clearly and forcefully. The curriculum involves a body of knowledge about the universe and about people, their nature, behavior, and values. It also provides an opportunity to gain specialized knowledge as a preparation for graduate study and entry into professional life. Beyond this breadth and depth of knowledge, the university recognizes that such an education is only a beginning and hopes to stimulate its students to pursue continuous development in the areas of human knowledge, to seek wisdom, to challenge the mysteries of life and examine its ultimate meaning, and to become useful members of society by embracing careers which will touch the whole community.

Approved by the University Senate in May, 1979.

History of the University

IUP has witnessed a history rich in accomplishment. Since 1875, when it served only 225 students in a single building, it has experienced continuous growth, becoming Pennsylvania's fifth largest university. The current enrollment is over 14,000, with students from thirty-six states and over fifty-five countries.

The first building, named John Sutton Hall in honor of the first president of the Board of Trustees, was opened for students on May 17, 1875.

In April, 1920, control and ownership of the school passed to the Commonwealth of Pennsylvania. In May, 1927, by authority of the General Assembly, the State Normal School became a college, with the right to grant degrees. The name was then changed to the State Teachers College at Indiana, Pennsylvania. In 1959, the legislature approved a change of name to Indiana State College; in the 1960s there followed a rapid growth in the liberal arts program.

In December, 1965, Indiana was redesignated Indiana University of Pennsylvania and given the authority to expand its curriculum and to grant degrees at the master's level. At this time the first doctoral program was initiated.

Twice, IUP has been included in *Barron's 300: Best Buys in College Education*. In 1990, *Money* magazine's *Money Guide* ranked the university twenty-second among the nation's public universities (and highest among those in Pennsylvania). Most recently, IUP was listed by *U.S. News and World Report* in the top twenty-five percent of colleges and universities in the region.

Accreditation

IUP is a state-owned institution for higher education as a member of the State System of Higher Education. It is an approved and fully accredited member of the Middle States Association of Colleges and Schools, the National Council for Accreditation of Teacher Education, the American Home Economics Association, the American Chemical Society, the American Psychological Association, the National League for Nursing, the American Society of Safety Engineers, the Committee on Allied Health Education and Accreditation, the National Association of Schools of Music, the National Association of School Psychologists, and the National Accrediting Agency for Clinical Sciences.

Buildings and Grounds

The main campus, originally consisting of twelve acres and one building, is now composed of a total of 204 acres on which are located seventy-two major buildings owned by the state and seven athletic fields. Two of the buildings, Breezedale and John Sutton Hall, have been entered in the National Register of Historic Places. The Co-op Recreational Park, located a few miles from the campus, consists of 280 acres and several buildings including a lodge and ski hut. The wooded hillsides offer opportunities for nature study and such outdoor recreational activities as hiking, skiing, and exercise trails.

Institute for Research and Community Service

In September, 1989, the Institute for Research and Community Service was created within the Research Division of the Graduate School to replace the Center for Community Affairs and the Institute for Applied Research and Public Policy Studies.

The Institute for Research and Community Service serves as the primary outreach office of the university to link community effort and need with the diverse resources of the university and to encourage research activities among the faculty. Major areas of responsibility include: 1) To expand economic development and public service initiatives within the university's research mission; 2) To provide a coordinating function for all IUP research centers; and 3) To provide leadership and support for the Applied Research Lab.

A wide variety of services is offered through outreach efforts to community leaders in government, business, education, human service, and health care agencies and organizations. Typical services include policy analysis for local governments, needs assessments, survey research, computer projects, software development, digital mapping, land use and site studies, and archaeological services including Phase I and II surveys. Through affiliation with the Pennsylvania State Data Center, a variety of specialized census and economic data reports are developed upon request.

Staff of the institute includes a director, assistant director, fiscal assistant, graduate assistant, several undergraduate students, and numerous faculty associates.

Information Systems and Communications Center

The Information Systems and Communications Center (ISCC), established in 1963, is located on the ground floor of Stright Hall. The ISCC provides computational support for undergraduate and graduate courses, faculty and student research, and the administrative requirements of the university.

The primary computing capacity of the center is provided by a DEC VAXcluster running VMS which supports both timesharing and batch

processing services. A campus network provides 9600 baud terminal access, with ethernet connectivity available in selected locations. IUP is connected to both the BITNET and Internet wide area networks.

Student access to computing is provided, for the most part, through the public computing laboratories. The primary public labs are strategically placed around campus to maximize their availability and impact. Several departments maintain computing facilities that are of a focused nature and which are intended to support specific programs.

Through implementation of its strategic computing plan, which is part of the university long-range planning process, the university is committed to providing the level of computing and information technology necessary for a modern institution of higher education. Guidance in this area is provided from both an Academic and Administrative Computing Advisory Committee. Undergraduate and Graduate students are represented on the Academic Computing Advisory Committee.

Library and Media Services

Patrick J. Stapleton, Jr., Library, the central library for IUP, was completed and dedicated in 1981. It adjoins Rhodes R. Stabley Library, which results in a combined structure of 156,000 square feet. The Cogswell Music Library, the University School Library, and the branch campus libraries at Armstrong Center in Kittanning and in Punxsutawney are the other components of the IUP library system. Twenty library faculty members, twenty-seven support and technical staff members, and nearly two hundred students are employed in the Libraries and Media Resources Division of the university. The book collection contains in excess of 600,000 volumes; there are 4,500 periodical subscriptions, 1.7 million items of microforms, 93,000 bound periodicals, and in excess of 24,000 volumes of governmental publications. (IUP is a designated Select Depository for federal and state publications.) The libraries' media holdings in all formats are extensive. Resources are supplemented through membership in OCLC for interlibrary loan, the Health Sciences Consortium (North Carolina), and the Laurel Highlands Consortium and associate membership in the Center for Research Libraries. The central library is open ninety-six hours a week during regular terms. The recently renovated Cogswell Music Library, located on the top floor of Cogswell Hall, contains approximately 6,000 books, 70,000 scores, and 10,000 recordings. Holdings of monumental editions are substantial. Sound recordings circulate only to faculty, but listening stations are available for use by all patrons. The University School Library's 6,500 volumes support the curriculum of grades K-6 at the University School. The Armstrong County campus library has more than 22,000 volumes, and the recently renovated Punxsutawney library contains more than 13,000 books as well as 150 periodicals and recordings of music, poetry, and drama.

University Senate

Purpose

The purpose of the University Senate is to provide a formal means through which the student body, faculty, and administration, working as a unified group, shall have a representative share in the governance of the university.

Nothing relating to the organization and administration of the University Senate shall be construed so as to limit the authority of the Council of Trustees or the president of the university with respect to the administration of the university as prescribed by law.

Composition and Elective Procedures

The University Senate shall consist of a number of faculty double the number of departments of the university, an administrative segment one-third the size of the faculty segment, and a student segment one-half the size of the faculty segment. The Senate shall also include one Alumni Association representative and four representatives from staff. Faculty, administrative, and staff members must hold full-time contracts at the time of election or appointment, and students must be full-time and in good standing. "Student" refers to both the undergraduate and graduate student bodies. The student segment shall consist of ten times as many undergraduate students as graduate students, each delegation to be elected by its representative student body. Undergraduate students shall be elected under the auspices of the recognized student association (as defined by Pennsylvania state Act 1982-188) and graduate students through elections arranged by their comparable body. In both cases, the officiating body shall call for and accept voluntary nominations for election to the Senate. Student members of the University Senate serve on most of the Senate committees.

The Foundation for IUP

The Foundation for IUP is a nonprofit agency established in 1967 to develop and maintain private support for IUP. It is governed by a twenty-four-member Board of Directors. The offices are located on campus in John Sutton Hall.

Funds raised through contributions from alumni, friends, faculty and staff, corporations, and foundations are used to support scholarships, academic and athletic enrichment, departmental programs, and other priority needs of the university. In 1992-93 contributions received totaled over $1.5 million, and the foundation's endowments are valued at $3.85 million.

Interim University Policy on Sexual Harassment

IUP affirms that sexual harassment is a violation of basic human rights, inconsistent with the purpose and principles of an academic community. **Sexual harassment of students and employees is unacceptable conduct and will not be tolerated.**

Any university community member who engages in sexual harassment is subject to the disciplinary process appropriate to his/her classification as an employee or student.

The right to confidentiality of all parties involved in a sexual harassment complaint shall be strictly adhered to insofar as it does not interfere with the university's legal obligation to investigate allegations of misconduct and to take appropriate corrective action.

IUP prohibits retaliatory action against individuals filing either informal or formal complaints of sexual harassment. Nothing contained in this policy protects an individual who maliciously makes false accusations. While seeking to protect those whose dignity might be compromised, it must be emphasized that false accusations of sexual harassment will not be tolerated.

Definition: Sexual harassment is a form of sex discrimination that is reprehensible and unlawful. Title IX of the education amendments of 1972 prohibits sex discrimination in employment. Sexual harassment is defined as:

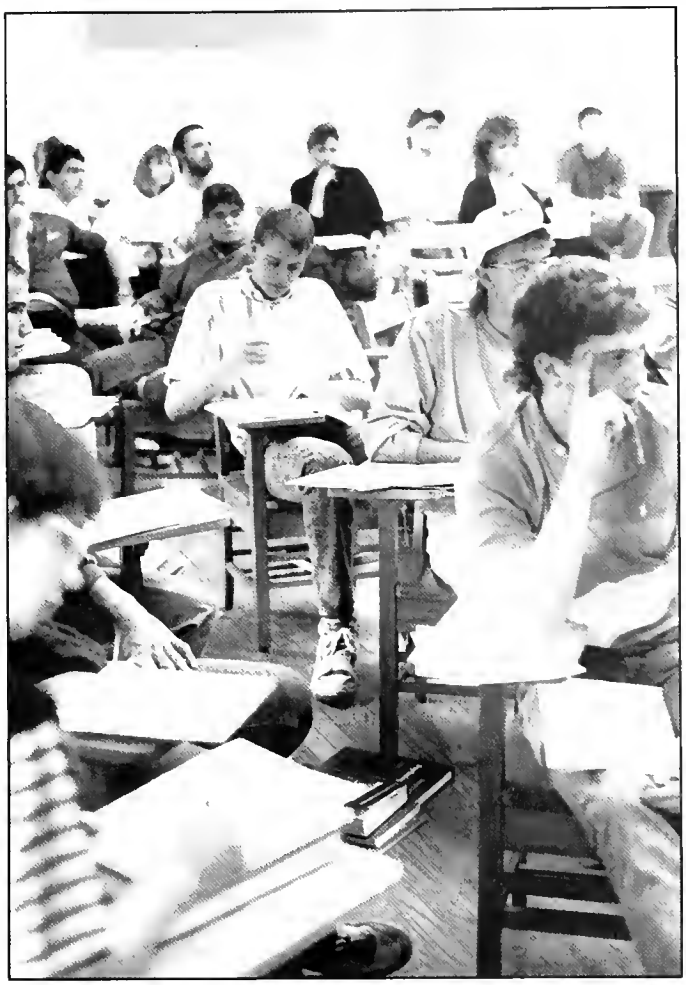
a. making unwelcome sexual advances
b. requesting sexual favors
c. verbal or physical conduct of a sexual nature—which submission to such conduct is made, either explicitly or implicitly, a term or condition of a person's employment or education
d. verbal or physical conduct of a sexual nature—which has the purpose or effect of unreasonably interfering with an individual's academic, personal, or professional performance
e. verbal or physical conduct of a sexual nature—which has the purpose or effect of unreasonably creating an intimidating, hostile, or offensive educational, social, or work environment
f. basing employment or academic decisions upon a person's submission to or rejection of verbal or physical conduct of a sexual nature

Sexual harassment occurs in a variety of situations. Many of these situations have two circumstances in common:

- the inappropriate introduction of sexual activities into relationships of unequal power
- an element of coercion—so that compliance with requests for sexual favors becomes a criterion for granting employment or academic benefits.

Sexual harassment may also involve relationships among equals. In these cases repeated sexual advances or demeaning verbal behavior have a harmful effect on one's ability to study, live, or work within the academic community.

Questions regarding the Sexual Harassment Policy or complaint procedures may be directed to the Director of Human Resources, G-30 Sutton Hall, IUP. Policy approved by University Senate, May 1, 1990; pending final approval by Council of Trustees.



The Branch Campuses

Robert H. Doerr, Director, Armstrong Branch
Norman T. Storm, Director, Punxsutawney Branch

IUP operates two branch campuses, one in Punxsutawney, twenty-eight miles north of the Indiana campus, and one in Kittanning, twenty-eight miles west of the Indiana campus. The first branch campus was established in 1962 in Punxsutawney. The following year the Armstrong campus in Kittanning was opened. The Punxsutawney campus accommodates 200-225 students and the Armstrong campus accommodates 450-550 students.

Control of the branch campuses is directly vested with the IUP administration and Council of Trustees. Advisory boards from the respective areas identify local needs. Both branch campuses carry full accreditation as integral parts of the undergraduate programs of IUP. This means that courses offered at the branch campuses are of the same quality as those offered at the Indiana campus.

Programs of Study
The branch campuses of IUP offer basic liberal studies courses for most majors in the various undergraduate colleges of the university. Students may schedule a full program for the freshman year and many sophomore-level courses. No student accepted at either of the branch campuses is eligible for transfer to the Indiana campus until he/she has completed two semesters.

Faculty advisers and administrators at the branch campuses are available to advise students on their instructional programs and the proper time for continuing at the Indiana campus, whether it be after two, three, or four semesters.

Business Associate Degree Program
The two-year Associate of Arts degree in Business is based upon a broad liberal arts program as well as professional competencies needed in the field of business. The program is offered at the Armstrong campus and the Punxsutawney campus. A student accepted for this program may concentrate in computer and office information systems. Most of the credits earned in the two-year program may apply toward a four-year degree program in business.

Criminology Associate Degree Program
A two-year program in criminology is offered only at the Punxsutawney branch campus and is not offered at the Indiana campus of IUP. The credits earned in the two-year program will apply toward the four-year degree program in criminology.

Admission
Any prospective student who wishes to attend either of the branch campuses instead of the Indiana campus may apply for admission by requesting an application from the Admissions Office or from the director of either branch campus. Students admitted into an Associate of Arts Degree Program must reapply for admission if they choose to pursue a bachelor's degree at IUP. The same standards and requirements used for admission at the Indiana campus are applied at both university branch campuses. The mailing addresses for the respective branch campuses follow:

Armstrong County Branch Campus
IUP
Kittanning, PA 16201

Punxsutawney Branch Campus
IUP
Punxsutawney, PA 15767

Housing
The Punxsutawney branch campus has privately owned residence halls for students living beyond commuting distance, while the Armstrong County branch campus operates university-owned residence halls. Students are free to choose their housing from all available sources, which include the residence halls and private homes or apartments in the community. A list of rooms and apartments is available in each campus director's office.

Food Service
Each branch campus has its own dining hall within the residence hall. Meals are served seven days a week during the time the university is in session. Residence hall students as well as students living in private homes and apartments may make arrangements to take meals in the dining halls. The dining service is operated by the same food service contractor as on the Indiana campus.

Rules and Regulations Concerning Student Behavior
Students at the branch campuses are subject to the same rules and regulations as students on the Indiana campus.

Fees
Branch campus students pay the same basic fees as Indiana campus students except for the health fee. The health fee at the Armstrong campus is $48 per semester, while Punxsutawney campus students do not pay a health fee.

Continuing Education
The School of Continuing Education plays a significant role in programming Community-University Studies classes (noncredit), academic workshops, and institutes in the Punxsutawney and Kittanning areas. The school is also responsive to the needs of the local community through credit and noncredit activities.

Admission and Registration

Undergraduate Admission Policy

Any graduate of an accredited four-year high school or holder of a GED equivalency diploma is qualified to apply for admission to IUP. Students who have completed the junior year of high school may file an application any time after July 1.

Requests for applications and catalogs should be addressed to
The Admissions Office
216 Pratt Hall, IUP
Indiana, PA 15705

Admission will be based on college quotas at IUP, taking into consideration restrictions in some curriculums. The Admissions Committee, in reviewing the applications, will take the following into consideration: academic excellence, giving equal opportunity to all students, high school grades, SAT/ACT scores, guidance counselors' recommendations, faculty recommendations, extracurricular activities, and other pertinent information that would be helpful to the Admissions Committee in making their decision.

Although the university does not require a specific number of high school credits in particular subject areas, applicants are strongly urged to take the usual college preparatory program in high school. Applicants should also take any available courses in the field of their intended major. Applicants should also be aware that certain majors at IUP require completion of a foreign language at the intermediate level in order to earn a Bachelor's Degree. However, the Admissions Committee does not require an applicant to take a foreign language in high school for admission to these majors.

Applicants are expected to name their major field upon application, but a change in major can be made during the freshman year without loss of credit. A change in major after the freshman year (restricted areas are excluded) usually entails a loss of credit and may result in a program of more than four years to satisfy graduation requirements.

Academically qualified applicants to the departments of Art, Music, and Theater will be admitted to the university by the Admissions Committee. However, admission to the requested major will be subject to the acceptance by the Department of Art after a portfolio review and by the Departments of Music and Theater after an audition. Students will receive information from the Art, Music, and Theater departments concerning auditions and portfolio reviews.

Application Fee

A check or money order (cash will not be accepted) for $20, payable to Indiana University of Pennsylvania, must accompany each application. This fee is nonrefundable and will be used to meet the cost of filing and processing applications.

The application form, the $20 application fee, and the official high school transcript must be mailed to the Office of Admissions, 216 Pratt Hall, IUP, Indiana, PA 15705

Freshman Applicants

The Scholastic Aptitude Test (SAT)/American College Testing (ACT)
All persons expecting to apply for freshman admission to IUP should plan to take the SAT or ACT on or before the November test date of their senior year in high school. The Admissions Committee recommends that the applicant first take the test in the spring of their junior year so that they may be considered for admission early in the fall of their senior year

Whether or not the applicant takes the SAT or ACT in the junior year, it is recommended that the examination also be taken no later than the December testing date of the senior year. The Admissions Committee gives the applicant the benefit of the highest scores from all test dates. It is, therefore, in many instances, to the applicant's advantage to take the examination in the senior year. However, the committee will use the scores from the junior year if the senior scores are not available at the time admissions decisions are being made.

The applicant should arrange to take the SAT or ACT through the high school principal or guidance counselor or by writing to the College Entrance Examination Board, Box 592, Princeton, NJ 08540 or American College Testing, P.O. Box 168, Iowa City, Iowa, 52243 for an information pamphlet and test registration form.

When the applicant receives the information and test registration form, he/she should fill out the test registration form and designate IUP as one of the universities to receive a copy of the test scores.

The Admission Application

Applications for admission will be available after July 1 following the student's junior year of high school.

The applicant may fill out and submit the application and accompanying forms to the guidance counselor after July 1 of the summer following completion of the junior year. Applications are considered by the Admissions Committee on a rolling basis.

The application deadline depends on the number of available vacancies in the freshman class and the number of applications received. Students are encouraged to submit an application and the required supportive information by December 31. The university reserves the right to close admissions when it feels that it has offered a sufficient number of acceptances to academically qualified students.

The applicant should give the completed application form and the $20 application fee to his/her high school principal or guidance counselor for completion of the high school record portion of the application. The principal or counselor should then mail the complete packet of admissions materials to the Office of Admissions, 216 Pratt Hall, IUP, Indiana, PA 15705.

The student's application is complete when the Admissions Committee receives the junior SAT or ACT scores and/or senior scores, the high school transcript, the completed application form, and the application fee. In some cases the committee may request additional information, such as a list of senior year subjects or a senior grade report.

This university uses the Social Security Number (SSN) as the basis for all student recordkeeping. Although disclosure of the SSN is not mandatory, its use will facilitate the coordination of national test results, financial aid awards, and the maintenance of accurate records. The SSN will be used solely for identification and/or record keeping purposes.

Processing the Application

(1) The Admissions Committee reviews, with care and understanding, each of the several thousand applications that are submitted each year.
(2) Decisions on applications are made on a rolling basis.
(3) Applicants who are admitted to IUP will be invited to attend an orientation program on campus to receive general information and discuss their academic and career plans with the college dean of their respective major and other advisers. The date of this appointment for the orientation accompanies the acceptance letter.
(4) Attendance at the orientation and payment of the $30 orientation fee signifies the applicant's interest but not commitment to attend IUP.
(5) By May 1, a $150 advance deposit payment is due from all incoming freshmen. This advance deposit payment will be credited to the applicant's housing charges and tuition.

Early Admissions Program

The Early Admissions Program permits students to enroll as college freshmen after completing the junior year in high school. Student applications for acceptance must originate with the student's high school guidance counselor and principal. Admission consideration will be given to those applications which contain a statement indicating explicit approval by the high school principal. The applicant must rank in approximately the top tenth of his/her class and have a combined SAT score of approximately 1150. The university Admissions Committee will exercise the final judgment as to university admission after a personal interview with the applicant. The university strongly recommends prior summer school attendance by all students admitted through the Early Admissions Program.

Transfer Admission

A student who has been attending another institution of higher education and wishes to transfer to IUP must submit an application and official transcripts of all postsecondary educational work. Transfer students are not required to submit their high school transcript or SAT/ACT scores.

Applications will be accepted for consideration for the fall and spring semesters after July 1 of the preceding year. The application deadline depends on the number of available vacancies in the transfer program and the number of applications received. Students are encouraged to submit an application, $20 application fee, and the required supportive information by February 1 for the fall semester and November 1 for the spring semester. Students who have an outstanding college academic record but who apply after the above-designated dates risk not being awarded admission to the university because of space limitations.

A nonrefundable orientation fee of $30 is required of all accepted students. Attendance at a Transfer Orientation Day in July/August is highly recommended. If a waiver of attendance at summer orientation is approved by the Admissions Office, the student will schedule courses as available in late registration the day before the start of classes.

The evaluation of credits from other institutions of higher education is the responsibility of the Office of Academic Information Systems and the academic college dean who has jurisdiction over the student's desired major. Normally, courses considered for transfer are only those taken from institutions which are accredited by the six regional accrediting agencies. Each course is usually evaluated separately. The evaluation normally includes a review of the description, semester hours, and grade of each course along with the applicability of the course to the student's major at IUP. However, only credits transfer, not grade-point average. It has been the policy of the university that only courses with a "C" or higher grade will be accepted, except for two-year associate degree graduates of state-supported community colleges in Pennsylvania. No matter how many credits are transferable, the student must satisfy all of the degree requirements falling into the categories of (1) university requirements, (2) college requirements, and (3) department requirements.

University requirements: Since all students are obliged to fulfill a basic program in Liberal Studies consisting of 53-58 semester credit hours and there is a reasonable degree of flexibility in the Liberal Studies requirements, the transfer evaluator and the college deans will look to this area first for applicable credits for transfer. Most introductory courses are generally equivalent.

Residency requirements: The university requires that at least forty-five credits, generally including the last thirty credits in a student's curriculum, must be earned by enrollment in courses at IUP. It should also be noted that for community college graduates a maximum of sixty credit hours is transferable to this institution for the purpose of fulfilling a specific program of study. Excess credits, if any, may be transferred but cannot be used for fulfilling the minimum requirements for the degree.

Transfer students, to remain in good academic standing, must meet the same quality-point average requirements as those specified for all other undergraduate students. See section entitled "Criteria Governing Continuance at IUP."

The university accepts credits associated with "D" grades only when they are part of a completed Associate Degree earned at a publicly owned community college in Pennsylvania. These "D" grades will be treated in the same manner as those earned at IUP. This articulation policy was adopted by the Board of State College and University Directors in 1973.

Continuing Education Admission

Part-Time Studies Program—Undergraduate

Part-time undergraduate study is available through the School of Continuing Education to any high school graduate, holder of a GED Equivalency Diploma, or adult over twenty-five years of age. No SAT scores are required. Note: A TOEFL Score is required as part of the application for an individual whose native language is other than English. Those who are not U.S. citizens must submit a notarized copy of their current visa and I-94 card or alien resident card.

Applications are available from the Part-time Studies Program and must be submitted with documentation directly to the School of Continuing Education by August 15 for the fall semester and December 15 for the spring semester. A $20 application fee is required. Applications submitted after established dates are not guaranteed consideration.

Transfer students may also apply to the School of Continuing Education for part-time study and must submit official transcripts for all previous college work attempted. An overall 2.0 GPA is required.

A student in the Part-time Studies Program is limited to a semester enrollment of no more than 11 credits and must apply for formal admission to a degree program before 30 IUP credits have been earned. Applications for degree candidacy must be filed by the midterm point of the fall or spring semester preceding candidacy. Specific requirements for grade-point average and IUP credit vary by degree program. The minimum credit criteria to apply for consideration for degree candidacy are as follows:

High School Diploma or GED	15 IUP Credits	2.0 GPA
Veteran (DD-214 required)	9 IUP Credits	2.0 GPA
Transfer (with 12 or more credits)	9 IUP Credits	2.0 GPA
Transfer (with 11 or less credits)	15 IUP Credits	2.0 GPA

Note: A student who has applied and has been admitted by the Office of Admissions to a branch campus is not eligible to apply to the School of Continuing Education.

Program for Visiting High School Students

IUP permits the exceptional high school student to preview university life and earn regular college credit on a limited nondegree basis. The student must have completed the sophomore year with a minimum of a "B" average and have the written support of the high school principal or guidance counselor. The parameters of the student's enrollment are defined in consultation with appropriate high school official and are limited to a maximum of nine credits per semester. For further information, contact the School of Continuing Education.

Post Baccalaureate Studies (Undergraduate)

The Post Baccalaureate Studies Program provides access to undergraduate courses to individuals who have an earned baccalaureate degree. Students may be seeking a second bachelor's degree, an additional teacher certification, or personal enrichment. Students may enroll on a full or part-time basis based on personal preference and availability of coursework.

Applications are available from the School of Continuing Education. A completed application and official transcripts of all previous undergraduate coursework must be submitted for review by August 15 for fall semester and December 15 for spring semester. Applications not submitted by established dates are not guaranteed consideration. A $20 application fee is required. The fee is waived for graduates of IUP.

Second Baccalaureate Degree
A student with an earned baccalaureate degree who wishes to complete the requirements for a second or subsequent bachelor's degree must make application and submit official transcripts indicating degree(s) awarded. The student must complete a minimum of thirty additional IUP credits and meet the requirements for graduation established by the academic department and college in which the new degree is to be earned.

Teacher Certification
A student with an earned nonteaching baccalaureate degree who wishes to complete the requirements for Instructional Level I certification **must** apply as a second bachelor's degree student. A minimum cumulative grade-point average of 2.50 is required for consideration for admission. To earn Instructional Level I the student must satisfactorily complete the prescribed courses in an IUP degree certification program at a minimum cumulative grade-point average of 2.50 and successfully pass the National Teacher Examination.

A currently Pennsylvania-certified teacher who wishes to add a new area of certification may apply to the School of Continuing Education under the category teacher certification. Individuals admitted to add an additional teacher certification will follow an individually planned and approved course of study.

Immunization Requirements
Students entering effective Fall, 1991, are required to complete a **Student Health Form** documenting immunization status. See Health Services information in section "Student Programs and Services."

Readmission Policy for Students Who Withdraw from the University Voluntarily
A student who withdrew from the university on a voluntary basis for reasons of health, financial difficulty, etc., and who wishes to reenter must notify, in writing, the dean of the college in which the student was enrolled at the time of his/her withdrawal, before July 1 for the fall semester (starting in September) or before November 1 for the spring semester (starting in January).

The Summer Sessions
The summer school program at IUP is designed to meet the needs of many students. Courses, workshops, and seminars are offered in the liberal arts, in teacher education, and in other fields of study.

Continuing university students, including newly admitted freshmen, who wish to accelerate their program of studies will find both Liberal Studies and special courses in all fields of study. Students from other colleges and universities may take courses at IUP; however, they are advised to first ensure that their home institution will transfer such credits earned at IUP.

Teachers-in-service will find courses in the summer program to serve a variety of needs. They may enroll to qualify for permanent certification, take refresher courses in their field of specialization, or take courses for the purpose of extending their certification to a new field.

The Summer Sessions Schedule, which contains information regarding courses and activities offered during the summer sessions, is usually available after March 1 and can be obtained by contacting the Registrar's Office, Room G5, Sutton Hall (412-357-2217), or the Graduate School, Room 128, Stright Hall (412-357-2222).

Attendance at summer sessions is open to all students but does not constitute admission or readmission for continuing registration in the fall and/or spring semesters. Students in good standing who desire admission must obtain an application through the Office of Admissions or the School of Continuing Education, as appropriate. Students who desire readmission for a fall semester must apply to the office of their college dean by the preceding July 1.

American Language Institute (ALI)
The American Language Institute offers intensive programs in English for international students and visitors from beginning through advanced levels each semester.

The English for Academic Purposes Program (EAP) is for applicants seeking to prepare themselves for study at any U.S. college or university. Depending on proficiency, enrollment is for ten weeks of intensive study, beginning first summer session, including twenty-five hours per week of classroom instruction. Students completing this program may earn three semester hours of university credit. Students may apply to IUP for conditional admission, pending completion of this program. The ALI also offers two shorter programs: English for Specific Purposes (ESP) for graduate students entering specialized fields and English for International Visitors (EIV) for visiting professionals who seek improvement in English proficiency while experiencing life in the U.S.

For further information about the ALI programs, contact Assistant Director, American Language Institute, 212 Eicher Hall, IUP, Indiana, PA 15705 USA, (412) 357-2402.

Finances

*Tuition Fees (as of May, 1993)

The tuition and fees set forth in this section were those in effect in May, 1993. The fee schedule is subject to change; these figures are to be considered simply as an estimate. A current fee schedule may be obtained by writing to the Admissions Office, IUP, or by phoning (412) 357-2230.

The tuition for all full-time in-state students is $1,414 per semester. This covers registration and the keeping of student records, use of the library, student welfare, and laboratory facilities. An additional $118 per credit will be charged for undergraduate credits scheduled in excess of eighteen.

Out-of-state full-time students pay tuition of $3,061 per semester. An additional $255 per credit will be charged for credits in excess of eighteen. The tuition for part-time in-state undergraduate students is $118 per semester hour. A part-time undergraduate student is one taking eleven or fewer semester hours. See the sections on Admission and Registration and on University Policies for further information concerning part-time students.

The tuition for part-time out-of-state students is $255 per semester hour. An in-state student is defined as one who is a bona fide resident of and domiciled within the state of Pennsylvania for a reasonable period, not less than one year, immediately preceding his or her registration for a term or semester in any state-supported college or university in the state of Pennsylvania. A minor will generally be presumed to be a resident of the place of his/her parents' or guardian's domicile.

The establishment of domicile is primarily a matter of continued residence and intention. Generally, Pennsylvania domicile is considered to be established upon the completion of at least twelve months of continuous residence within the state at the time of registration for courses.

*The university reserves the right to change its fees without notice.

*Other Fees

Audit Fee — Full standard fees will be assessed for each course audited, exception being persons on Social Security or equivalent retirement benefit, who will be given remission of basic fees for such classes where space is available.

Orientation Fee — A nonrefundable fee of $30 must be paid by each student accepted for enrollment. This fee will be used to cover the cost incurred by the university on the student's behalf during Freshman Orientation Day on campus and Fall Freshman Orientation. Payment of this fee signifies the student's interest but not commitment to attend IUP.

Testing Fee — Each entering freshman must participate in placement testing during the summer immediately preceding the student's matriculation on campus. A fee of $65 is assessed for this overnight, two-day experience for students admitted to the main campus. Parents pay a nominal fee for their participation in the accompanying parent orientation program. Branch campus students participate in a summer one-day diagnostic testing experience only with a fee of $40. Students receive information about the summer testing program prior to the testing date(s). Fees are included in the regular billing and are nonrefundable. Please see the catalog section on Orientation for further information about the Orientation Phase II program.

Health Fee — The student health fee of $55 per semester is assessed for each full-time undergraduate or graduate student at the main campus. All students enrolled in summer sessions will be assessed a student health fee of $18 for each of the two sessions. This fee covers services, medications, lab tests, and procedures provided by the IUP Health Center. Part-time undergraduate students taking six to eleven credit hours will be assessed a $27.50 per semester health service fee. Undergraduate students taking less than six credits have the option of paying the $55 per semester fee, or they may choose the Fee-for-Service schedule available at the IUP Health Center. Students attending branch campuses have health fee options. The fee is waived for students living more than sixty miles from campus or on internship at a site more than thirty miles from campus. For further information on health fees, contact the University Health Service at (412) 357-6475.

Educational Services Fee — All students are charged a fee to support academic equipment and library resources. For full-time students the fee is $75 per semester; for part-time students the fee is $35 per semester, and all students are charged $35 per summer session.

Housing Fee — The room fee for students living in university residence halls for the 1993-94 academic year is $853 per semester for most double-occupancy rooms and $1,285 per semester for most single-occupancy rooms. Most resident students are required to take meals in university dining halls and can select from either Plan A or Plan B. The exceptions occur in university-owned apartment-style residence halls.

Meal Fee — Meal fees that went into effect June, 1993, are as follows:

Plan A —	20 meals per week (breakfast, lunch, and dinner, Monday through Saturday, brunch and dinner on Sunday)	$638/sem
Plan B —	15 meals per week (breakfast, lunch, and dinner, Monday through Friday)	$600/sem
Plan C —	10 meals per week (lunch and dinner, Monday through Friday)	$476/sem
Plan D —	5 meals per week (lunch only, Monday through Friday)	$235/sem
Plan E —	Any 10 meals per week	$516/sem

Student Activity Fee — An activity fee is collected from all students and administered through the Student Cooperative Association under regulations approved by the Council of Trustees. This fee of $87.50 per semester covers the cost of student activities in athletics, lectures, entertainment, student publications, etc., and is payable in one sum for the semester. The Student Activity Fee is $35.50 for part-time students. These fees apply to main campus students only. Students attending the Armstrong or Punxsutawney campuses pay $84 per semester full-time and $32 part-time. (These fees are subject to change without notice during the academic year.)

Facilities Fee — All students are charged a fee to support maintenance and repair projects, recreational facilities, and the advancement of technologies. For full-time students the fee is $75 per semester; for part-time students the fee is $35 per semester, and all students are charged $35 per summer session.

Late Registration Fee — Students who desire to register on the day prior to the start of classes, designated by the university as the Late Registration Day, will be assessed a Late Registration Fee of $50. Students who register for classes after completion of the university's Late Registration Day will be assessed a Late Registration Fee of $100. Exceptions to this fee may be granted by the provost or designee for students admitted late to the university for reasons deemed appropriate by the provost.

Bad Check Charge — Students making checks payable to "Indiana University of Pennsylvania" which are not acceptable to the bank for any reason will be charged $10 for each bad check in the amount of $.01 to $49.99 and $20 for bad checks written for $50 or more.

Military Science Fee — An activity fee of $5 is required for ROTC cadets to cover the cost of Cadet Corps functions. This fee is payable directly to the military science department.

Students Studying Abroad — Students enrolled in the studies abroad program will pay a program fee per semester to the university. All other fees assessed by the foreign institution will be paid directly to the foreign institution by the student.

Med-Tech Students — During the clinical year a fee may be levied and collected by the participating hospital. The only other cost to these students shall be an administrative fee of $150 to be collected by the university. Room and board shall be the responsibility of the student.

Financial Delinquency Policy — Registration is not in fact complete until a student pays the fee for such registration and the university reserves for itself the right to bar such a student from classes. When it has been determined during the course of a semester that a student's account has become delinquent from accrued charges, the Registrar's Office will be notified of this delinquency and advised to refrain from reporting the student's grades and from issuing any transcripts for that student's work until the delinquent account has been satisfied. Faculty members will continue to submit a grade for the financially delinquent student; however, requests from students will not be honored, and official reports will be released by the Registrar's Office only after the student has cleared his or her account or has established a payment plan satisfactory to the Accounts Receivable Office.

Miscellaneous Costs — In some courses students are required to obtain supplies and materials to complete course projects. In many courses, a student may make a voluntary contribution to a cooperative fund established for the purpose of obtaining these supplies and/or services at a lower cost. Examples are art courses, field trips, etc.

Estimated Expenses Per Semester

	In-State	Out-of-State
Instructional Fee	$1,414.00	$3,061.00
Housing	853.00	853.00
Meals	638.00	638.00
Student Activity Fee	87.50	87.50
Health Fee	55.00	55.00
Facilities Fee	75.00	75.00
Books and Supplies	500.00	500.00
	$3,622.50	$5,269.50

Miscellaneous and travel expenses would be in addition to the above.

*Cost of books and supplies may vary depending on major and class enrollment.

Summer Sessions Fees

Basic Fee — The basic fee for students enrolled for any of the regular summer sessions is $118 per semester hour for undergraduate students.

Housing Fee — Room rates for the 1993 summer sessions are
Double occupancy — $54 per week (without phone)
Single occupancy — $82 per week (without phone)
Students are charged for each session according to the number of weeks they will require housing. Resident students are required to take meals in university dining halls and can select from Plan A or Plan B.

Meal Fee — Meal rates for 1993 summer sessions are
Plan A — 20 meals per week $42 per week
Plan B — 14 meals per week $39 per week
Plan C 10 meals per week $32 per week
Plan D 5 meals per week $16 per week
Plan F Any 10 meals per week $34 per week

Student Activity Fee — For each of the two summer sessions, this fee is $29.50, payable at time of registration.

Student Health Fee — Each undergraduate and graduate student enrolled in IUP summer sessions will be assessed $18 for each session for Student Health Services.

Special Fees

Degree Fee — A fee of $30 will be charged each candidate for a degree at the time of approval of application for graduation. This fee is to cover costs of preparing diplomas and the graduation ceremony.

Transcript Fees — Applications for transcripts must be made only in writing to the registrar, either by U.S. mail or on forms available at the transcript window in Sutton Hall-Ground Floor. Such requests must include:

(1) Your full name and Social Security number as of your graduation or termination of enrollment at IUP. (Please note any name changes since graduation.)

(2) Your present address.

(3) Whether you are requesting a transcript of your undergraduate and/or graduate work.

(4) Whether you graduated or, if not, when you were enrolled.

(5) The full and clearly stated name(s) and address(es) of person(s) to whom you wish the transcript(s) sent.

The transcript fee is $3 for each copy requested. (Checks or money orders should be made out to Indiana University of Pennsylvania.) A charge of $6 will be assessed for express transcript service.

Any requests which are not accompanied by the proper fees or information will be returned to the senders for inclusion of them. No transcript requests will be processed without the payment of transcript fees.

Official transcripts (containing signature and university seal) will not be issued to students directly. The university will attempt to mail official transcripts within a reasonable time. However, in the event of its failure to do so, damages will be limited to the fee, if any, paid by the student for the copy or copies of the transcript. In no case is the university responsible for consequential damages.

Damage Fee — Students are responsible for damages, breakage, loss, or delayed return of university property.

Billing and Payments

All bills, including basic fee and housing fee, are payable as specified on the billing notice; students have several options for payment plans. Checks or money orders, in the exact amount of the billing notice, should be made payable to IUP unless otherwise specified. Book Store purchases are on a cash basis.

It is desired that payments for the entire semester be made in August for the first semester and in December for the second semester; however, for a nominal charge an installment plan is available.

Delinquent Accounts

Students will not be permitted to enroll for any semester nor to graduate until all bills previously incurred have been paid; nor will credit be certified to any other institution or the Department of Education until all overdue accounts have been paid. A late payment fee of $10 for each day past the due date will be assessed for delinquent accounts up to a maximum of $50.

Undergraduate students desiring to leave school before the close of a semester must report to the Advising and Testing Center and to the Accounts Receivable Office to settle all unpaid accounts. Graduate students report to the Graduate School dean.

IUP Refund Policy

The university must engage its faculty, assign residence hall space, and arrange for dining contracts in advance of each term in accordance with the number of students who expressed their intent to be enrolled. When students withdraw from the university, they create vacancies which cannot be filled, and financial commitments for salaries and services by the university must be honored. The refund policy at Indiana University of Pennsylvania applies to all students enrolled in credit-producing programs at the university either full-time or part-time and is effective January 1, 1993. **ANY STUDENT CANCELLING OR WITHDRAWING FROM HIS/HER FIRST SEMESTER/SESSION SHOULD REFER TO SECTION IIC.**

I. Cancellation

Students who have made prepayments to the university, who are unable to attend classes, and who notify IUP prior to University Check-in or earlier are entitled to a full refund of all fees paid, **LESS APPLICABLE ADVANCE DEPOSITS.** To be eligible for such a refund, the student must notify the Director of Accounts Receivable in writing prior to University Check-in. The Director of Accounts Receivable will forward to the registrar copies of cancellation notices and the registrar will cancel the student's registration and notify the appropriate university offices. Students who use university residence halls and/or dining services the week prior to the start of classes and cancel will forfeit an amount equal to one week's fee for such services plus the full amount of any advance deposit payment.

II. Total Withdrawal from the University

Students who register for classes and then withdraw from the university on or after University Check-in are subject to the following:

A. Undergraduate students withdrawing from the university must process such withdrawal through the Advising and Testing Center, Pratt Hall. Graduate students must withdraw through the Graduate School Office, Stright Hall. The official withdrawal date will be established by the Advising and Testing Center (undergraduate) or the Graduate School Office (graduate). Advance deposit payments toward tuition shall be nonrefundable.

B. Students totally withdrawing from courses, except for those attending his/her first semester/session at IUP upon receiving approval from the applicable office (Advising and Testing Center or Graduate School), will forfeit a portion of the semester charges in accordance with the following schedule. **A student attending his/her first semester/session will be entitled to a reduction of charges as outlined in section IIC.**

Withdrawal on Calendar Day Basis	Percentage of Student's Total Semester Charges to Be Forfeited
— University Check-in through 14 days	20%
— 15 through 21	30%
— 22 through 28	40%
— 29 through 35	50%
— 36 or beyond	100% (no reduction of fees)

The start of calendar days is defined as the first day of classes as scheduled on the university calendar.

Refunds for students receiving financial assistance from scholarships, loans, and/or grants will be returned to the source of aid in accordance with the provisions prescribed by the funding source.

C. First semester/session students who cancel prior to University Check-in are entitled to 100 percent of fee paid, less applicable advance deposit.

Students withdrawing during their first semester/session, upon receiving approval from the applicable office (Advising and Testing Center or Graduate School), will forfeit a portion of the semester charges in accordance with the following schedule:

Time of Withdrawal Week Basis	Percentage of Student's Total Semester Charges to Be Forfeited
— First Week	7%
— Second Week	13%
— Third Week	20%
— Fourth Week	27%
— Fifth Week	33%
— Sixth Week	40%
— Seventh Week	47%
— Eighth Week	53%
— Ninth Week	60%
— Tenth Week and beyond	100% (no reduction of fees)

Students will be charged a full week of fees for any partial week of enrollment. Advance deposit payments shall not be refundable.

Students withdrawing during summer sessions will forfeit a portion of the session charges in accordance with the following schedule:

Time of Withdrawal Week Basis	Percentage of Student's Total Session Charges to Be Forfeited
— First Week	20%
— Second Week	40%
— Third Week	60%
— Fourth Week and beyond	100% (no reduction of fees)

D. During summer sessions, returning students totally withdrawing from the university, upon receiving approval from the applicable office (Advising and Testing or Graduate School), will forfeit a portion of the total session charges in accordance with the following schedule:

Calendar Day of Withdrawal	Percentage of Student's Total Session Charges to Be Forfeited
— First class day through fourth calendar day	50%
— Fifth calendar day and beyond	100% (no reduction of fees)

E. The associate provost will determine the official start of classes for each semester or session. Refunds to students enrolled in credit-bearing summer conferences, institutes, workshops, or tours of less than five weeks' duration will be granted a 50-percent refund through the first day of the class (unless a no refund policy is required by the sponsor).

III. Individual Course Withdrawal

A student may cancel an individual course(s) up to University Check-in by notifying the registrar in writing. If a student cancels a course(s) prior to University Check-in, no penalty will be charged and the student will receive 100-percent reduction of charges for the course(s) cancelled. No reduction of charges will be made to full-time students who withdraw from individual courses after University Check-in.

Individual course withdrawal is defined as a reduction in class load but not total withdrawal from the university. Example: a student who registers for three courses and then withdraws from one or two classes but continues with the other class or classes.

Part-time students (undergraduate students who register for less than twelve credits and graduate students who register for less than nine credits) will forfeit a portion of the credit-hour fee in accordance with the following schedule:

Calendar Day of Individual Course Withdrawal	Percentage of Student's Instructional Fee to Be Forfeited
— First class day through fourth calendar day	50%
— Fifth calendar day and beyond	100% (no reduction of fees)

Reduction of charges will be granted only for instructional fee. No reduction will be granted to students who drop and add like number of credit hours. Reductions will be granted to students for individual course withdrawals during summer sessions under the same basis as outlined under section IID.

IV. Termination of Residence Hall or Dining Service Contract

A. **Academic Year (Fall and Spring Semesters)**

1. **Residence Hall Termination** — Release from a residence hall contract is not granted except under those conditions outlined in the contract. Any student who meets the conditions for release and

submits a written request for release to the Office of Housing and Residence Life through University Check-in will be assessed no forfeiture and will receive a 100-percent reduction of room fee, less applicable advance deposits. Requests received after University Check-in will result in forfeiture of one week's room fee for each week, or portion thereof, the student is assigned to a residence hall. A week's rental charge is determined by dividing the semester room fee by the number of weeks in the semester. The specific date of release will be determined by the Office of Housing and Residence Life. The date a student moves into the residence hall should not be confused with University Check-in.

2. **Dining Service Termination** – Any student who is released from his/her Dining Service Contract by the Office of Housing and Residence Life through University Check-in will be assessed no forfeiture and the student will receive a 100-percent reduction of charges of the dining service fee, less applicable advance deposit. Any student who requests in writing to terminate his/her university dining service contract after University Check-in and is granted a contract release from the Office of Housing and Residence Life will forfeit a portion of the semester charges in accordance with the following schedule:

Date of Termination From Dining Service Contract	Percentage of Semester Fee to Be Forfeited
— University Check-in through the 35th calendar day	50%
— 36th calendar day and beyond	100% (no reduction of fees)

B. **Summer Sessions**
Once a student applies for and receives a housing and/or food service assignment, he or she must request in writing and obtain a release of that assignment from the Office of Housing and Residence Life in order to be eligible for a reduction in charges in accordance with the following schedule:

Date of Termination from Residence Halls/Dining Contracts	Percentage of Session Charges to Be Forfeited
— Check-in date* through fourth calendar day of classes	50%
— Fifth calendar day and beyond	100% (no reduction of fees)

*The Office of Housing and Residence Life will publish the date students are to check into the residence halls for each summer session. The check-in date is the effective date of the student's contract.

V. Other Provisions

No reduction of charges will be granted unless formal withdrawal procedure has been initiated through the Advising and Testing Center by the student at the point of withdrawal. Written and dated notice is required by the student or the student's family in special circumstances, such as sickness, within thirty days of the student's withdrawal. In order to receive a reduction of charges for individual course withdrawal, documentation must be submitted to the Accounts Receivable Office prior to the close of the semester or session in which the course was offered.

No reduction of charges will be granted by the university to students who are suspended or expelled from classes, residence halls, and/or dining service.

The Advising and Testing Center (for undergraduate students) and the Graduate School (for graduate students) may request exceptions to these policies when circumstances (such as death and medical reasons) justify it.

Students who are military reservists or members of the National Guard and are ordered to active military service by the President of the United States will receive a full reduction of charges for tuition. Other fees will be prorated.

The Accounts Receivable Office, Administrative Annex, is responsible for implementing this refund policy. Students who wish to appeal the decision rendered by the Accounts Receivable Office may do so through the treasurer to the vice president for Finance.

Financial Aid

The Financial Aid Office, located at 308 Pratt Hall, offers financial information and counseling to all students attending IUP. The types of financial assistance offered by the Financial Aid Office include student employment, loans, grants, and scholarships. In most cases, the Free Application for Federal Student Aid (FAFSA) and the PHEAA Aid Information Request (PAIR) are used to determine eligibility for these programs.

The Financial Aid Office of IUP is providing the following information in compliance with federal guidelines for the dissemination of financial aid information.

In order to be considered for financial aid administered through the university, the Free Application for Federal Student Aid (FAFSA) and the PHEAA Aid Information Request (PAIR) must be submitted to PHEAA in Harrisburg. Students will be awarded assistance based on demonstrated financial need. In order to be eligible for continued funding, the applicant must remain in satisfactory academic standing at the university, as defined in the Academic Standards Policy, and meet the standards of the Financial Aid Sufficient Progress Policy.

Title IV Financial Assistance Programs include the following: Federal Pell Grant, Federal College Work Study Program, Federal Supplemental Educational Opportunity Grant, Federal Perkins Loan, Federal Stafford Loan, Federal Parent Loan for Undergraduate Students, and Federal Supplemental Loan for Students. Maintaining satisfactory academic progress at IUP for Title IV assistance purposes is defined as being in compliance with both the university's Academic Standards Policy and the Financial Aid Sufficient Progress Policy. Inability to meet the guidelines of these two policies will result in a loss of funding from all Title IV programs.

Financial Aid Sufficient Progress Policy

The Financial Aid Sufficient Progress Policy applies to all undergraduate students enrolled in the university.

A. Sufficient Progress
To be in good standing on a sufficient progress basis, a student must have earned at least 75 percent of the cumulative number of registered credits at IUP.

1. "Registered credits" is the number of credits for which a student is enrolled at the end of the Drop/Add period (for a student who was originally registered and charged at full-time status, and who reduces during Drop/Add to part-time status, the registered credits will be calculated as twelve).

Each student will be measured for sufficient progress annually in January after fall grade processing. This evaluation will determine if the student has a sufficient percentage of credits earned in order to be eligible for Title IV funding for the next financial aid award year (July 1 through June 30).

B. Financial Aid Eligibility Warning
For a student who has not earned at least 75 percent of the cumulative number of registered credits at IUP, a one-time Financial Aid Eligibility Warning Period will be extended in order for deficiencies to be corrected. This extension period will permit the student to receive Title IV funding for the next financial aid award year (July 1 through June 30).

C. Financial Aid Suspension
If a student does not meet the sufficient percent of progress evaluation after the Financial Aid Eligibility Warning Period, then all Title IV aid for that student will be suspended in the next financial aid award year (July 1 through June 30). A student who is in this financial aid suspension status, however, will also be reviewed at the end of the spring semester and summer terms in order to evaluate whether or not the percentage of progress has been met through additional coursework. If this improvement to 75 percent in the percentage of progress is achieved, then the student's Title IV financial aid suspension will be rescinded beginning with the next term of enrollment.

D. Appeal Process
For students who have experienced unusual circumstances which have led to a lack of sufficient percentage of progress, such as medical emergencies or death of a family member, a written appeal may be

submitted to the Financial Aid Appeals Committee for consideration of reinstatement of Title IV aid eligibility.

Students who are notified during the annual January review period that their Title IV aid will be suspended in the next financial aid award year must submit a written appeal to the Financial Aid Appeals Committee before June 30. This written appeal must specifically outline the reason(s) for the percentage of progress deficiency and how the student will make up this deficiency. For students who miss the June 30 deadline, an appeal for reinstatement of Title IV aid for the spring term of the next award year will be accepted for review if received before November 30.

After reviewing the written appeal of a student in financial aid suspension, the Financial Aid Appeals Committee may decide to reinstate Title IV financial aid eligibility for specific periods of the next financial aid award year if the student had justifiable reasons for the lack of sufficient progress. All appeal letters will be answered in writing by the Financial Aid Appeals Committee as to the approval or denial of the requested financial aid reinstatement and the semesters which are involved with the decision.

E. Reinstatement of Title IV Aid Eligibility
For a student who has satisfactory academic progress deficiencies, one of the following must occur in order for that student to receive Title IV assistance:
1. The student can reestablish eligibility for Title IV assistance by meeting the minimum requirements for satisfactory academic progress.
2. A student who is on academic probation and/or financial aid eligibility warning will be eligible to receive Title IV funding while classified in one or both of these categories.
3. In the case of a student who has not met the minimum criteria for satisfactory academic progress due to unusual or mitigating circumstances and has filed an appeal(s) which has granted the student continuance of financial aid eligibility, Title IV aid funds may be reinstated.

F. Summer Sessions
Title IV Financial Assistance Programs may be available during summer session to eligible students. Students who lack sufficient progress only may enhance satisfactory academic progress through additional coursework during summer sessions and receive Title IV assistance. However, all students attending summer sessions must have a cumulative quality-point average of at least 1.5 in order to receive funds. Exceptions may be granted for special circumstances by obtaining an appeal form from the financial aid office.

G. Time Frame for Degree Completion
All students must complete their degree requirements within an established time frame. Since enrollment status may vary from semester to semester, the maximum time frame for degree completion is measured in terms of credits registered at IUP.

Under normal circumstances, an undergraduate student should complete the requirements for a bachelor's degree at the point of having 165 registered credits at IUP. Since 75 percent of the registered credits must be earned in order to be maintaining satisfactory academic progress, 124 credits (the number generally required for graduation) would be earned at the point of having 165 registered credits.

For majors with graduation requirements in excess of 124 credits, the maximum number of registered credits would increase proportionally. For example, for degrees that require 130 credits, the maximum number of registered credits at IUP is 173 credits.

Students who exceed these credit guidelines due to loss of transfer credits, change of major, or double majors will be screened by the Financial Aid Eligibility Review board for continuance.

H. Treatment of Audits, Incompletes, and Other Grades
In order that a student fully understands how various grades and enrollments impact upon the calculation of satisfactory academic progress, the following information is provided:
1. Audits, "S," and "U" Grades
Because course audits, "S," and "U" grades carry no credits, they are not reviewed or counted for sufficient progress purposes.
2. Incompletes
Grades of "I," "R," and "*" are treated as credits attempted/zero credits earned/no effect on QPA. However, these grades are treated as noncompleted credits and have an impact in the calculation of the percent of progress measure. (Note: The "*" is an administrative symbol indicating that a grade was not submitted at the time of grade processing.)
3. "F" Repeat with Replacement
An "F" repeat with replacement is treated as credits attempted/credits earned/with the quality points of the new grade replacing the 0.00 QP of the original "F" grade. An "F" repeat has a positive effect on the QPA but represents an additional number of credits attempted in regard to the percent of progress measure.
4. "D" Repeat with Replacement
Repeated classes that are "D" replacements to a student's record are treated as credits attempted/zero credits earned/with the quality points of the new grade replacing the 1.00 QP of the D grade. A "D" repeated with replacement may improve a student's QPA but represents an additional number of credits attempted in regard to the percent of progress measure.
5. Repeats with Averaging
Courses that are repeated with averaging count as credits attempted/credits earned/with the quality points for the class averaged into the QPA. The maximum time frame for degree completion may be impacted by repeat with averaging classes.
6. Withdrawals
Grades of "W," "WP," or "WF" are treated as credits attempted/zero credits earned/no effect on QPA. Any type of "W" grade is treated as noncompleted credits in the calculation of the student's percent of progress standing.
7. Pass/Fail Grades
Pass grades are treated as registered credits/credits earned/no effect on QPA. Fail grades are treated as registered credits/zero credits earned/with zero QP averaged into the calculation of QPA.
8. Noncredit Courses
Noncredit classes, such as those with Continuing Education Units (CEUs), are not used in measuring sufficient progress, since these classes cannot be applied towards degree requirements and no financial aid may be received for enrollment.
9. Institutional Credits
Institutional credits are counted as registered credits/credits completed. The QP for the course is not averaged into the student's overall QPA.
10. Cancelled Semester
All registered credits/credits completed are calculated in the determination of percent of progress. The QPA for a cancelled semester is not averaged into the overall QPA of the student.

The appeal process regarding financial aid decisions is through the vice president for Student Affairs.

Payment of Financial Aid

Payment of financial aid awards is done on a semester basis. All financial aid, with the exception of private scholarships, work-study, and the guaranteed student loans, is credited to the student's bill in advance. The cost of attending IUP and the university's refund policy are listed in this catalog. Please refer to the index for further information. A financial aid fact sheet containing specific information about financial aid may be obtained at the Financial Aid Office. In addition, the director and assistant directors of Financial Aid are available for student consultation from 8:00 to 11:45 a.m. and 1:00 to 4:15 p.m., Monday through Friday. The Financial Aid Office recommends that students with questions contact the office at (412)357-2218.

Forms of Financial Assistance

Employment provides an opportunity for students to earn money to help finance their educational expenses. The university encourages students to participate in the on-campus student employment program, since studies have demonstrated that part-time employment provides a positive stimulus to students in their adjustment to campus life and the maintenance of their academic averages. All campus employment is administered by the Financial Aid Office.

Loans are a form of aid for which repayment must begin upon termination of the student's university education.

Grants are funds which carry no obligation for repayment. These funds are awarded to the student on the basis of financial need.

Scholarships are funds which carry no obligation for repayment. They are gifts awarded to the student on the basis of ability.

Federal aid administered through the university is available for both the regular academic year and the summer sessions. The application deadline for upperclassmen for these federal aid programs is normally May 1 for the following academic year. Freshmen may apply for aid upon acceptance to the university. For the summer sessions, the application deadline is also May 1. Students must be enrolled at least half time (6 credits for undergraduates) each semester to be eligible for financial aid consideration.

Employment

Employment programs provide an opportunity for students to earn money to help finance their educational expenses. Students may be employed at minimum wage on campus for up to twenty hours per week when classes are in session and forty hours per week during vacation periods.

The Financial Aid Office, 308 Pratt Hall, posts known available jobs on the glass-enclosed bulletin board outside the office. Students are responsible for finding their own jobs, whether under the Federal College Work-Study (FCWSP) Program or University Employment (UE).

Federal College Work-Study (FCWSP) — The Federal College Work-Study Program is a form of federal aid awarded on the basis of need as measured by the Free Application for Federal Student Aid. A FCWSP award is not a guarantee of employment. FCWSP is a nonrepayable source of aid that allows students to work and earn money performing on-campus jobs. Money earned from FCWSP jobs is to be used to help meet educational costs. Students are eligible to work until they have earned the amount listed on their award letter.

University Employment (UE) — Many students who are not eligible for FCWSP find on-campus employment through IUP's University Employment Program. UE does not require an application and is not based on financial need.

ARA Food Service Employment — Students interested in working in the dining halls (Folger and Foster), the Underground Express, Itza Pizza, the Oak Room, or ARA Catering should inquire about jobs from the managers of these dining facilities.

Loans

Government-Sponsored Loan Programs

Federal Perkins Loan Program — The application for the Federal Perkins Loan Program is the Free Application for Federal Student Aid. The loan is awarded to students on the basis of financial need. It is interest-free and nonrepayable until nine months after termination of education, at which time it becomes repayable at five percent interest with a minimum forty-dollar payment per month and up to ten years to repay.

Federal Stafford Loan — Applications for the Federal Stafford Loan are obtained from lending institutions. These include banks, savings and loan associations, credit unions, etc. Through this program, freshmen may borrow up to $2,625 per academic year, sophomores may borrow up to $3,500 per academic year, and junior and seniors may borrow up to $5,500 per academic year. Subsidized Federal Stafford Loans are awarded on the basis of need as measured by the Free Application for Federal Student Aid and require no payment of interest or principal until six months after students cease half-time enrollment (six credits per term). Unsubsidized Federal Stafford Loans substitute for family contribution and require payment only of interest during periods of enrollment and the six month grace period. Following the grace period, both kinds of Federal Stafford Loans are repayable directly to the lending institution at a variable rate not to exceed nine percent.

Federal Parent Loans for Undergraduate Students (FPLUS) are obtained from lending institutions such as banks and credit unions and administered in conjunction with the federal government. Parents may borrow up to the cost of education minus other financial aid. The loans are repaid at a variable interest rate not to exceed ten percent per year starting sixty days after the first check is issued.

Federal Supplemental Loans for Students (FSLS) are generally available only to independent students or dependent students whose parents are unable to receive Federal PLUS Loans. Applications are obtained from lending institutions such as banks, credit unions, and savings and loan associations. The Free Application for Federal Student Aid must be filed and borrowers must first apply for a Federal Stafford Loan and be enrolled at least half-time (six credits per term). Freshmen and sophomores may borrow up to $4000 per academic year, juniors and seniors up to $5000 per academic year. Repayment of principal and interest begin upon full disbursement of the loan at a variable interest rate not to exceed eleven percent. Some deferment options are available for principal repayment.

University-Sponsored Loan Programs

The Financial Aid Office, in conjunction with the Student Cooperative Association, administers the University Loan Fund in behalf of IUP students. Loans are available to assist students who are in financial need and have a financial aid refund coming to them. The maximum loan available will be $300 with repayment to be made in sixty days. No interest will be charged for these loans. Loans will be made to meet educational expenses only. Applications for the University Loan and additional information may be obtained at the Financial Aid Office.

The University Loan Fund encompasses the following individual loan accounts.

Jennie E. Ackerman Loan Fund — The Jennie E. Ackerman Loan Fund was established in 1962 in memory of Jennie E. Ackerman, who served as supervisor of student teachers at IUP for many years.

Robert Bellis Loan Fund — This loan fund has been established at IUP by friends and relatives of a graduate of Indiana State College.

Mary Edna Flegal Loan Fund — A loan fund has been established by Alpha Chapter of Delta Kappa Gamma Society International in memory of Mary Edna Flegal, who graduated from Indiana Normal School in 1899 and served as director of Art. Upperclass students enrolled in the College of Education are eligible to receive these funds.

Colette Cromer Gershman Loan Fund — Family and friends of Colette Cromer Gershman established this fund in memory of a home economics education graduate. Upperclass students enrolled in the College of Health and Human Services are eligible for the loan.

Margaret Flegal Harte Loan Fund — The primary purpose of this fund is to aid students who are in temporary need of assistance.

Suzanne Marshall Hartman Loan Fund — A loan fund has been established by family and friends of Suzanne M. Hartman, a home economics graduate of IUP. This loan is granted to deserving students in their sophomore, junior, and senior years.

John Hays Memorial Fund — This loan fund is in memory of Dr. John Hays of IUP's educational psychology department. Dr. Hays was a faculty member at IUP for twenty-one years.

Oliver W. Helmrich Memorial Loan Fund — The Helmrich Memorial Loan Fund was established by family and friends in memory of an IUP faculty member. Eligibility is limited to seniors and graduate students enrolled in the College of Education.

William Henzelmann Memorial Fund — This loan provides assistance to junior and senior students enrolled in German or Russian in the Department of Foreign Languages. It was established in memory of William J. Henzelmann, a faculty member in German.

Mary Anne Kolessar Loan Fund — Established in memory of Mary Anne Kolessar, a consumer services student at IUP, the fund aids students majoring in consumer services who are in temporary need of funds.

Jane E. Leonard Memorial Loan Fund — The loan honors a faculty member at Indiana Normal School from 1875 to 1921.

Mack Loan Fund — Established by the Mack family, the fund provides assistance to worthy students with financial need.

Rusty Preisendefer Memorial Loan Fund — This fund was established by Suzanne Preisendefer Brickner in memory of her husband, Lt. Harold A. Preisendefer, who was killed in action in Vietnam.

Flossie Wagner Sanford Student Loan Fund — The Pennsylvania Federation of Women's Clubs established this loan fund in honor of a past president of the club and former member of the faculty.

Varsity I Loan Fund — Established by the Men's Varsity I Club, this loan is available for use by all IUP students. Preference is given to freshmen.

Norah Zink Loan Fund — The Zink Loan honors a former geography professor at IUP. Foreign students in their sophomore, junior, or senior year are eligible to receive these funds.

Grants

Federal Pell Grants are available for eligible students. Applications for and information on deadlines for this program are available from the Financial Aid Office or high school counselors. All students are urged to apply for this grant.

Pennsylvania Higher Education Assistance Agency Grants (PHEAA) are available for both the regular academic year and the summer sessions. Contact the Financial Aid Office to determine the application deadlines for the PHEAA Grant Program.

Federal Supplemental Educational Opportunity Grants (FSEOG) are available to eligible students who demonstrate exceptional financial need as determined by the analysis of the Free Application for Federal Student Aid.

Scholarships

The Financial Aid Office administers various scholarship programs in behalf of the university. These scholarships have been established through the Foundation for IUP and the university by alumni and friends of the university to recognize outstanding students and assist them in financing their educational expenses. Unless otherwise noted, no application is required for consideration.

Aetna Life and Casualty Scholarship — A $100 award is presented each semester to a safety management major under this scholarship established by the company. The award is to be given for academic excellence with strong consideration for women and minority students. Applications should be made to the chairperson, safety sciences department.

AFS Scholarship — One full-tuition scholarship will be offered to an AFS student for one year. Letters of application should include a brief description of the student's AFS experience.

ALCOA Scholarship — A $1,000 scholarship is awarded each year to a student majoring in management information systems. The recipient is selected by the MIS faculty. Students in their sophomore, junior, or senior year are eligible to receive these funds.

Grace Johnson Allman Safety Science Scholarship — The Allman scholarship is awarded to a student chosen by the chairperson of the Safety Sciences Department who is worthy, deserving, and a credit to the scholarship.

APSCUF Scholarships — The IUP APSCUF Scholarships are awarded to students who have earned between twenty-nine and forty-six credits and who have shown involvement in IUP and community activities.

ARA Scholarship — Ten $1,000 scholarships and seventeen meal waivers are awarded each year to sophomores who have attained at least a 3.5 grade-point average and who demonstrate need as determined by the Free Application for Federal Student Aid. Meal waivers are awarded to students living on campus; cash scholarships are presented to students living off campus.

J. Donald Bartolomucci Scholarship — This fund awards scholarships to upperclass students in the College of Business who are deemed worthy by the Scholarship Committee.

Ella C. Bendix Home Economics Scholarships — Bendix Scholarships are awarded to worthy students with financial need who are juniors, seniors, or first-year graduate students. Selection is made by the Home Economics Scholarship Committee.

Board of Governors Scholarship — Up to thirty-five full-tuition scholarships are awarded each year to academically talented minority students who have scored approximately 1000 on SATs and who are in the top twenty-five percent of their high school class. The BOG scholarships are renewable for a maximum of eight fall/spring semesters for recipients who maintain a satisfactory grade-point average.

Jemima S. Boyd Scholarship — This scholarship was established from the estate of Grace Noble Lacock. Each year, the interest from the account is awarded to female students who intend to teach in schools in Pennsylvania. The scholarships, ranging from $200 to full tuition, are granted to students who will be entering their freshman year at IUP. Eligible applicants will be invited to apply.

Braman Music Scholarship Fund — Interest, up to an amount of $100, will be granted as a single scholarship to an eligible prospective freshman music major whose performing area is one of the following: violin, viola, cello, or double bass. Selection of grantee is made by the string area music department faculty, and the scholarship is awarded for the second semester. Application and information are available from the music department.

Israel and Birdye Brody Scholarship — Scholarships are awarded each year to juniors who are permanent residents of Indiana County.

Edward N. Brown Memorial Scholarship — The scholarship is awarded to an IUP chemistry major who has completed at least four semesters of chemistry. Selection is made by the Brown Scholarship Steering Committee.

George M. Burke Memorial Scholarship — A four-year scholarship is awarded to a freshman enrolled in the College of Business on a full-time basis who demonstrates financial need and who is a permanent resident of Pennsylvania.

M. Vashti Burr Memorial Award — A scholarship is awarded annually to an entering student who is deemed by the faculty to be most deserving, having in mind his or her economic need and the excellence of his or her industry and scholarship. This award is given through the generosity of William V. Whittington. Eligible applicants will be invited to apply.

Howard B. Buterbaugh Scholarship Fund — A gift to the university from Dr. Howard Buterbaugh's estate, the scholarship is to be given to upperclass students based on their academic performance.

Clark Scholarship — The Lt. Alpheus Bell Clark Memorial Scholarship was established by Mr. and Mrs. Steele Clark in memory of their son. Scholarships are awarded each year to young men or women who are seniors in the university, who, in the opinion of a committee chosen by the president, best qualify for the honor in terms of academic ability, leadership, and service to the university, with preference going to veterans or sons or daughters of veterans.

Beverly Sue Clark Memorial Scholarship — The scholarship is awarded to a junior or senior preparing for a career in teaching. Preference is given to residents of Indiana, Cambria, Westmoreland, and Armstrong counties and to survivors of casualties of the 1991 Persian Gulf War.

Continuing Education Part-time Scholarship — The scholarships are awarded to part-time nontraditional students admitted to or enrolled in degree-seeking programs in the School of Continuing Education. Applications are available in the Financial Aid Office and the Part-time Studies Program Office two months before the beginning of each semester.

Dr. Charles F. Cooper Accounting Scholarship — In honor of a retired professor, accounting firms and friends of Dr. Cooper have established a scholarship to be awarded to a senior accounting major. To be eligible, a student must complete ninety credits (at least seventy-five credits completed at IUP) by the end of the preceding spring semester including fifteen credits in accounting and, specifically, intermediate accounting II and cost accounting. Students must have an overall 3.5 average and complete an application that includes a narrative description of their plans for the future. The scholarship will not exceed the amount of tuition, fees, room, and board.

Jack Crossan Memorial Scholarship Fund — Established by fellow athletes, classmates, and friends, this scholarship shall be awarded at the discretion and good judgment of the head basketball coach to a basketball player of good character and sound academic standing.

Roy A. Daugherty Scholarship — Scholarships will be given to worthy first-year students with preference given to sons and daughters of members of Sigma Phi Epsilon fraternity who attended IUP with Mr. Daugherty. Eligible applicants will be invited to apply.

Charles Davis Scholarship — This scholarship is awarded each year to a music major who has shown outstanding ability. The amount of the award will be determined by the funds available from Phi Mu Alpha, the professional music fraternity at IUP.

Eberly Family Scholarships — The Eberly family supports the Foundation Distinguished Achiever Scholarship Program by funding a recipient from Fayette, Greene, Washington, or Westmoreland counties. The Foundation Distinguished Achiever Scholarship application must be on file in the Admissions Office by February 1.

Alexa J. Boyer Emerick Nursing Scholarship — Scholarships are awarded to outstanding and deserving junior and/or senior students enrolled in the nursing curriculum at IUP. Eligible recipients will be invited to apply.

The Natalie S. Fassett Scholarship Fund — This fund provides scholarships to worthy students who may be in need of financial assistance. Preference will be given to students who attended Homer-Center High School.

Foundation Distinguished Achiever Scholarships — The IUP Foundation Distinguished Achiever Scholarships were established to honor outstanding students who rank in the top tenth of their high school classes and/or who score at least 1100 on the junior SATs. Consideration is given to school and community leadership, entrepreneurship, music, art, theater, forensics, and other special accomplishments. The scholarships are valued at $1,000 per year for four years. Applications and further information are available through the IUP Admissions Office.

Thomas V. Frazier Memorial Scholarship — A senior student interested in the theater arts is the recipient of this award. The student may be a drama student or just active in off-stage roles. Financial need will be a consideration, with the chairperson of the theater department and members of the Financial Aid Office selecting the recipient.

Michael Gendich Scholarships for Athletes — The scholarships are awarded to worthy and deserving student athletes by the director of Intercollegiate Athletics.

Dr. F. Philip Gorman Scholarship — The Gorman Scholarship is awarded to a junior in a major relating to the health profession. The recipient must have a minimum QPA of 3.0 and be involved in university activities. Eligible candidates will be invited to apply.

Gorell Education Fund — Established by the Gorell family, these scholarships are awarded to music students with exceptional need.

Margaret Flegal Harte Scholarship — Margaret Flegal Harte Scholarships ranging from $200 to full tuition are awarded to top students of each freshman class for the first year. Eligibility is based on academic achievement and financial need. Scholastic achievement is measured by the computation of high school rank and College Entrance Examination Board scores. Financial need is determined through the Pennsylvania State (PHEAA) Grant Application. Eligible applicants will be invited to apply.

Ann Moon Hayward Scholarship — Scholarships will be awarded to incoming music majors with superior vocal potential for their first year.

William Heard Scholarship — Established as a memorial by friends and colleagues of William Heard, formerly a professor at IUP, the scholarship is awarded each year to a junior chemistry major for his/her senior year. The recipient is selected by the chemistry department steering committee on the basis of contributions to the department and the university, financial need, academic record, and interview. Applications are available each spring in the chemistry department office.

Dr. Willard W. Hennemann, Jr., Memorial Scholarship — Scholarships are awarded to deserving and worthy undergraduate and/or graduate students with a strong commitment in the field of mathematics education at the elementary or middle school level. Recipients are selected by a committee of members of the mathematics department.

Isolde A. Henninger Endowment for Achievement — Friends and family members have established the endowment to provide support for foreign language students and the Critical Language Program. Foreign language majors who have demonstrated significant improvement in their studies are welcome to apply in the German department to Dr. Harold Sommer.

Robert L. Hite Scholarship — The Hite scholarship is awarded to a full-time freshman majoring in accounting, finance, or management from specified counties in Pennsylvania and New York.

H. Eugene Hulbert Scholarship — The scholarship is awarded to junior music majors each year on the basis of academic excellence and financial need. The recipient is selected by a scholarship committee. Applications are available in the music department office during the second week of classes in the fall.

Patti Hurley Scholarship — A four-year scholarship of $150 per year is awarded to a female graduate of Indiana Area High School attending the university, based upon academic achievement, participation in school activities, and economic need. This memorial scholarship was established by the family and friends of a 1971 graduate of Indiana Area High School who was killed in an automobile accident two weeks after high school graduation.

Gloria Bryan Johnson Memorial Endowment — In memory of wife and mother, Gloria Bryan Johnson, Dr. Hugh Johnson and his family have established a memorial scholarship endowment for music students. The scholarship committee of the Department of Music will make the yearly selection of the student.

Sally Johnson Memorial Scholarship Fund — This scholarship will go to a female junior student, based upon her outstanding athletic abilities. Information and applications are available through the physical education department.

Junior Miss Scholarship — A $500 scholarship is awarded to the winner of the Indiana County Junior Miss Pageant if the winner applies and is accepted to IUP on a full-time basis.

Kaufmann's/The May Department Store Scholarship — A $2,000 scholarship is awarded to a student for the senior year who has been selected to intern at the store for the summer prior to the senior year.

Judy Kovalchick Scholarship — The scholarship is awarded each year to a graduate of St. Mary's High School who attends IUP for the freshman year. Applications are available in the Guidance Office of St. Mary's High School.

Eugene E. Lepley Memorial Scholarships — These scholarships are awarded to two junior or senior students majoring in Health and Physical Education or Sports Science.

Dr. Yu-Chen Liu Memorial Endowment — An endowment has been established in Dr. Liu's memory by friends and family. The interest earned on the endowment will be used to sponsor scholarships for Chinese-American students. The Asian Studies Committee will make the selection of the scholarship awardees.

Joel L. Logan Memorial Scholarship — This $500 scholarship is awarded each year to a senior male nursing student who demonstrates financial need. Preference is given to a student who exhibits an interest in psychiatric nursing. "Need" is measured by the Pennsylvania State Grant Application. The scholarship is donated by Joan and Homer Logan in memory of their son, a 1977 IUP graduate.

Mary Helen Krouse MacDonald Memorial Scholarship — The MacDonald scholarship fund was established to encourage and reward exceptionally gifted students enrolled at IUP who are majoring in art. The scholarships are awarded to winners of the student entries in the juried art exhibitions held in the Community Arts Center of Cambria County in Johnstown, Pennsylvania.

Mathematics Contest Scholarship — Each year the IUP Mathematics Department sponsors a contest involving students from area high schools. A $200 scholarship is awarded to the winning school to be used by a student from that school attending IUP as a math major.

The McDonalds-Thomas McCormick Memorial Scholarship — A scholarship of $1,000 per year is awarded to a graduate of an Indiana County high school who majors in Hotel, Restaurant, and Institutional Management at IUP.

McFarland Scholarships — McFarland scholarships are awarded each year to honor upperclassmen who have earned more than forty-five but less than seventy-five credits at IUP, who have grade-point averages of at least 3.80, and who have made special contributions to the university and community.

The $500 scholarships are awarded in the spring for use in the fall and spring of the junior year. No application is required.

Regis McKnight Scholarship Fund — The scholarship is awarded to male high school graduates excelling in athletics as a tribute to Regis "Peck" McKnight, who for many years was head basketball coach. Selection of recipients will be made by the athletic director and the head basketball coach.

Arveta DeGaetano McNaughton Scholarship — A scholarship is awarded each year to a graduate of the Business Department of Indiana Area Senior High School who enrolls in the IUP College of Business as a full-time freshman.

John W. McNaul Scholarship — The McNaul memorial scholarship is awarded to a graduating senior from Somerset High School who will attend IUP as a full-time student and who demonstrates financial need.

Alan P. Mewha Memorial Fund — This scholarship is for students in the Geography and Regional Planning department; grant selection will be made by a three-member geography and regional planning scholarship committee. The scholarships are unrestricted as to use or purpose and flexible in the amount awarded and time presented. For further information, contact the geography and regional planning department.

Benjamin T. Miller Drawing Award — To memorialize Benjamin T. Miller, colleagues, students, and friends have established the Drawing Award.

Carol L. Moorhead Scholarship — The scholarship is awarded each year to an entering freshman who will major in primary education. Preference will be given to a student aspiring to teach kindergarten.

William P. Moorhead Scholarship — The scholarship is awarded to a student studying organ in the Department of Music. It was established as a memorial to Mrs. William P. Moorhead.

Arthur G. Morrell Memorial Scholarship — The Arthur G. Morrell Memorial Scholarship is a cash award given to a mathematics major completing his/her junior year at IUP who best reflects the character and interests of Capt. Arthur G. Morrell, a graduate in mathematics, United States Marine pilot, and IUP football captain. The recipient is selected by the Morrell Scholarship Committee. Students may apply for the award (applications are available at the mathematics department office) or be nominated by a mathematics faculty member.

Morris Scholarship — The Helen Wood Morris scholarship was established by Lt. Col. L. M. Morris in memory of his wife, a graduate of the university. The scholarship is awarded annually to a student selected by a committee named by the university. The student chosen must be in the highest quarter of his/her class, must be in need of financial assistance, and must have demonstrated worthiness in terms of character, personality, leadership, and American citizenship.

Mary Muldowney Scholarship — A scholarship in the amount of $100 for any junior or senior student majoring in music with an emphasis on voice; this award is governed in amount and number of scholarships given by the Music Department.

G. William Musser Scholarship — The Musser scholarship is awarded to an incoming freshman majoring in pre-law. It is renewable for four years if the recipient maintains a 3.0 average.

Natural Sciences and Mathematics Scholarship — Established by an anonymous donor, the Natural Sciences and Mathematics scholarship is awarded each year to a freshman who has graduated from Indiana Area High School and enrolls in the College of Natural Sciences and Mathematics. Eligible applicants to IUP will be invited to apply.

Jeannette Nelson Scholarship — The scholarship is awarded to an Alpha Phi student selected by at least three members of the alumnae chapter.

Russel C. Nelson Scholarship — This scholarship is awarded each year to an upperclass music education major deemed worthy by the Music Scholarship Committee. Further information is available in the Music Department office.

Louis J. Nocco Scholarships — These are awarded to deserving and talented members of the football team.

Tom Norman Scholarship — This award is available to a soccer player in financial need. All disbursements will be controlled by the soccer coach in the amount he or she feels necessary.

Ethyl V. Oxley, Opal T. Rhodes, and Helen C. Merriman Scholarships — Each year the Home Economics Alumni Association honors three former faculty by awarding $200 scholarships. The Opal T. Rhodes scholarship is awarded to a home economics education major, the Ethyl V. Oxley scholarship to a food and nutrition major, and the Helen C. Merriman scholarship to a consumer services major. Announcements concerning applying for these scholarships are made in the College of Health and Human Services during the fall semester.

Carl E. Patchin Scholarship — The Patchin scholarship supports the Foundation Distinguished Achiever Scholarship program by funding a recipient who will enroll in the College of Business. Foundation Distinguished Achiever Scholarship applications must be on file in the Admissions Office by February 1.

Margaret M. Patton Foundation Scholarship — This scholarship has been established at IUP to assist students attending the university who are worthy and in need of such assistance. Preference will be given to students attending the Armstrong Campus.

Albert Pechan Scholarship — This is a scholarship for a science major. The amount of the award depends on the money available in the scholarship fund. Selection of a recipient is made by the science department faculty.

Lenora Pechan Scholarship — The Lenora Pechan scholarship was established by the late Dr. Albert R. Pechan, a former member of the Senate of the Commonwealth of Pennsylvania and of the Board of Trustees of IUP, to provide funds for students who are members of the Reserve Officer Training Corps, who have been outstanding students in the ROTC, and whose other academic work is satisfactory. First priority will be given to students from Armstrong County, selected by the officers of the ROTC and the Faculty Scholarship and Loan Committee.

Everett and Lavina Peterman Scholarship — A four-year scholarship is awarded every four years to a business education or management information systems major who has graduated from an Indiana County high school.

Edna B. Pierce Memorial Fund — An Indiana Area High School student, accepted at IUP and enrolled in a teacher education curriculum, will be awarded a one-year scholarship.

William E. Pierce Scholarship — This scholarship has been established to award a one-year grant to the junior ROTC cadet having the highest standing in his/her sophomore ROTC class.

Pittsburgh Home Economics Teachers Scholarship Fund — An award of approximately $500 annually may be given to an undergraduate student majoring in a program in the College of Health and Human Services who graduated from one of the Pittsburgh public schools. Preference is given to students majoring in home economics education and seniors, but the award may be given to a junior or a sophomore student enrolled in any human services major who is deserving both scholastically and financially. Eligible students should apply for this scholarship through the dean of the college.

Ruth Podbielski Scholarships — These are awarded to worthy women athletes at IUP.

Shelly G. Portman Memorial Scholarship — The scholarship, established by the Portman family, will be awarded each year to juniors excelling in concert dance. Selection will be made by the director of concert dance.

The John J. Prandy Memorial Scholarship — This scholarship provides support to a worthy and deserving student majoring in criminology who has achieved junior standing and has expressed interest in pursuing a career in law enforcement.

Willis E. Pratt Award — The Savings and Trust Company of Pennsylvania has established an athletic scholarship in the name of the late Dr. Willis E. Pratt, chancellor emeritus and president of IUP from 1948 to 1968. It will be awarded to athletes chosen on the basis of scholastic and athletic ability and financial need.

The Mildred M. Reigh Memorial Scholarship — This scholarship provides encouragement and financial assistance to students pursuing a degree in mathematics education or elementary education with a mathematics concentration. Recipients must have reached a minimum of junior standing, carry at least a 3.0 grade-point average, and participate in one or more organizations for teachers of mathematics. Selection is made by the Mathematics Department.

Frank Ross Memorial Scholarship — The scholarships are awarded each year to upperclass students of ceramics who are deemed worthy by the Scholarship Committee. The awards are presented in memory of a former ceramics faculty member.

The David J. Rovnan Memorial Scholarship — This scholarship is awarded each year to an IUP student who is a member of the staff of the *Penn*. Selection is made by the journalism department.

David Schwartz Memorial Journalism Scholarship — The scholarship is established in memory of David Schwartz, a graduate of IUP, by his parents, the *Indiana Gazette*, the Journalism Department, and friends at IUP. The scholarship is available to outstanding students majoring in journalism. Contact the Journalism Department for further information.

Senior Class Scholarship — The scholarship is awarded to a student who has earned seventy-five to ninety credits at the end of the first semester of the junior year, has a QPA of at least 3.5, and is involved with campus affairs, organizations, and activities. Eligible students will be invited to apply.

The Patricia Shields Memorial Scholarship — This scholarship is awarded each year to a full-time student who has achieved junior standing and carries at least a 3.0 grade-point average. Preference may be given to students who originally attended the Armstrong branch campus of IUP.

The Susan E. Shubra Memorial Scholarship — The scholarship is awarded to a junior or senior having at least one remaining term to be completed as a major in the Department of Human Development and Environmental Studies. Applicants must have a minimum 3.0 grade-point average, be of good character, and demonstrate outstanding achievement in academics and leadership in university/community services. Selection is made by the Department of Human Development and Environmental Studies.

Ethel Seavey Simpson Scholarship — The Ethel Seavey Simpson scholarships are awarded to academically talented freshmen at IUP who demonstrate financial need. Eligible applicants will be invited to apply.

Sam Smith Football Scholarship Fund — The solicited funds are to be used for football scholarships. All the funds are to be distributed as scholarships in accordance with the rules and regulations of the university.

Sons of Italy Recreative Club, Inc., Scholarships — Scholarships of $400 are awarded to graduates of Indiana Area High School and Blairsville/Saltsburg High School who enroll as full-time students at IUP.

Spadafora Family Endowment — Cecil and Ann Spadafora of Indiana and their entire family have established a scholarship to be awarded to one football player each year who has graduated from an Indiana County high school, a Mt. Pleasant high school, or a Bentworth high school. The student will be selected by a committee consisting of the IUP athletic director, head football coach, and a representative of the family. The recipient will be a high school graduate excelling in athletics and a credit to the fund.

Gregory Spinelli Memorial Fund — This fund provides a meaningful award and recognition for students with exceptional promise and commitment to a career in the criminal justice system. An award of $100 will be made annually to a second-semester senior enrolled in the IUP criminology department. Greg Spinelli was an F.B.I. agent killed in the line of duty.

Gerald E. Stossel Football Scholarship — Stossel scholarships are awarded to deserving and needy student athletes.

Student Art Scholarship — Students of the Department of Art and Art Education contribute art works to be sold. Funds thus received permit awards of $50 to be made periodically. Applications for these awards are received and screened, and awards are made by a committee of art students. This award is confined to students of the Art Department.

Michael J. Supinka, Jr. Memorial Scholarship — Two scholarships are awarded to graduates of Homer-Center High School who have demonstrated academic excellence and leadership qualities and enroll at IUP as full-time freshmen.

The Barbara Thomas Scholarship Fund — This fund provides support to deserving and worthy students who have graduated from high schools in Clearfield County, Pennsylvania, and who enroll in IUP to study elementary education. The scholarship is renewable providing the recipient maintains at least a 2.5 grade-point average.

The Tomb Family Scholarships — These scholarships provide support to deserving and talented students enrolled at IUP.

Howard E. Tompkins Computer Science Scholarship — The Tompkins scholarship is awarded to a computer science major entering the junior year who has completed at least nine credits of computer science.

Murray M. Varner Scholarship — Murray M. Varner was an alumnus and professor at IUP. This scholarship has been established by his friends and family as a fitting memorial to a dynamic educator. The scholarship is awarded each year to an upperclass (at least twenty-seven credits at IUP) student in the College of Business who is a permanent resident of Indiana County. The recipient must be academically stable, personable, enthusiastic, and motivated. Applications are to be submitted to the Financial Aid Office by October 30. Winners will be announced during the fall.

Vaughn Foundation Scholarships — Two $500 scholarships are awarded each year. One recipient is selected by athletics; the other is awarded to a junior or senior business major with above-average grades who demonstrates personal need. A letter of application to Charles B. Stevenson in the College of Business initiates consideration for the second scholarship.

Corrine Menk Wahl Scholarship — Awarded to the top students of each incoming freshman class, this scholarship ranges from $200 to full tuition for the first year without regard to financial need. Scholarship achievement is established by the computation of high school rank and SAT scores. Eligible applicants will be invited to apply.

Saul and Louise Waxler Memorial Scholarships — These provide funding for football grants-in-aid.

West Branch Area High School Scholarship — The scholarship is awarded to a graduate of that high school in Clearfield County, Pennsylvania, who demonstrates financial need and positive academic achievements. Applications are made through the Guidance Office of the West Branch Area High School.

Zucchelli Scholarship Fund — This $100 scholarship will be awarded to a female IUP student majoring in physical education. Information and applications are available through the Health and Physical Education Department.

Other Resources

Athletic Grants-in-Aid — IUP participates in intercollegiate athletics as a Division II institution and awards Athletic Grants-in-Aid in accordance with NCAA rules and regulations. Interested students should contact the Athletic Director, Memorial Field House, IUP, Indiana, PA 15705.

Residence Assistants — Upperclass students and freshmen at the end of their first year may apply to become residence assistants at IUP. Students earn a room and board waiver, as well as a small stipend, by working as residence assistants in IUP residence halls. Application timetables and deadlines are advertised in the *Penn* and posted in the residence halls and other spots around campus. The application process requires references and individual and group interviews. Residence assistants are selected on the basis of leadership and interpersonal skills and the willingness and ability to perform as role models. Residence assistants must have and maintain a 2.2 quality-point average. For further information, please contact present residence assistants or residence directors or the Office of Housing and Residence Life, G14 Sutton Hall, IUP, Indiana, PA 15705.

Paul Douglas Teacher Scholarship — Scholarships of up to $5,000 per year are awarded to superior students who will pursue teaching careers. Recipients must teach for two years for each year they receive the scholarship. Applications are available in the Office of Student Teaching and must be submitted by May 1 for the following year.

Private Scholarships — Various service clubs, organizations, churches, schools, and industries offer scholarships to students. High school guidance offices, libraries, and hometown newspapers are often excellent sources for information concerning private scholarships.

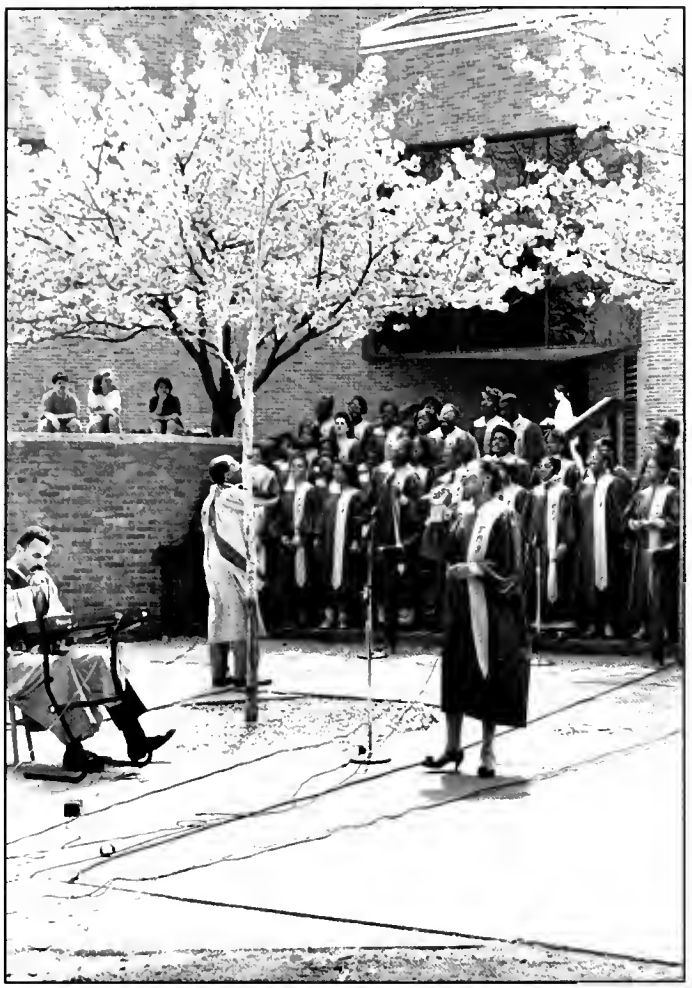
ROTC Scholarships — One-, two-, and three-year scholarships are available to both male and female students who are enrolled in the Reserve Officer Training Corps program. The scholarships pay for tuition, fees, and books, plus $100 per month for ten months per school year. Interested students may obtain applications and criteria information by contacting the ROTC department in Pierce Hall at IUP.

Office of Vocational Rehabilitation Assistance (OVR) — Students who have physical or learning handicaps may receive educational benefits through the Office of Vocational Rehabilitation. In order to be eligible, students must satisfy the physical and financial requirements of the agency. For further information regarding OVR, students should contact their county office of vocational rehabilitation.

Loan Forgiveness Programs

Act 115 — The Urban and Rural Teacher Loan Forgiveness Act provides new teachers in approved school districts with the opportunity to apply for loan forgiveness of up to $2,500 per year of teaching to a maximum of $10,000 of guaranteed student loans obtained through PHEAA. Further information is available from PHEAA, Attn: Urban and Rural Loan Forgiveness Program, P.O. Box 8114, Harrisburg, PA 17105-8114.

Veterans Benefits — In addition to regular sources of financial aid, veterans and dependents of veterans may be eligible for V.A. benefits. For further information, veterans are urged to contact the Veterans Counselor, 308 Pratt Hall, IUP, Indiana, PA 15705.



Student Programs and Services

Orientation

IUP offers a three-phase orientation program for all new students. Freshmen are expected to participate in each of the three programs, as they are intended to provide information and programs which are designed to insure a successful first-year experience.

Orientation Phase I: Interview/Orientation Day occurs during the late fall or spring prior to students' matriculation on campus. During this day-long experience, accepted students and their parents visit the main or branch campuses, participate in major presentations describing academic and student life, and discuss academic program offerings with college deans and departmental representatives. This is an opportunity to assist students as they make informed choices regarding the appropriateness of IUP as their undergraduate college of choice.

Orientation Phase II: Summer Preregistration Placement Testing, Advising, and Course Selection Program occurs during the summer immediately preceding students' matriculation on campus. This experience is designed to assess academic readiness for courses integral to the IUP curriculum, including English, mathematics, and foreign languages. Students admitted to the main campus or the Learning Center program participate in an overnight, two-day experience which includes testing, academic advising, and orientation to university curricular requirements and cocurricular opportunities. Students who are admitted as branch campus freshmen participate in a one-day program. Concurrent parent orientation programs are offered.

Orientation Phase III: Fall Orientation occurs as students move on to campus immediately prior to the beginning of fall classes. Phase Three is designed to assure a smooth transition from the home environment to IUP's campus community.

IUP views this three-phase orientation as unique and extremely important to freshman retention and satisfaction with the university. The freshman year is critical in regard to academic success. During this time, students must simultaneously develop academic competence in the college curriculum and adjust to the personal decision-making process college life affords. Each of the three programs is designed to assist in this important college adjustment process. Freshmen are expected to participate fully in these three programs.

Residence Life

IUP is a residential campus. Its thirteen residence halls and two apartment buildings are structured on a geographical basis into two areas. Each area is supervised by a full-time student affairs professional with a background in student development and counseling. In addition, each residence hall has a professional residence director or graduate residence director to handle the administrative and supervisory functions of the building including responsibilities for programming and policy enforcement. Each residence hall also has undergraduate resident assistants, RAs, who are responsible for helping students, planning programs, carrying out administrative tasks, and providing leadership for the development of a community among the approximately thirty students living in their individual section of the residence hall. The university's two apartment buildings are staffed with a professional residence director and student managers. A student manager is similar to a resident assistant.

It is the policy of IUP to offer full, equal, and nondiscriminatory assistance to all students without regard to their race, color, religion, national origin, sex, ancestry, sexual orientation, or physical ability in both the placement in university housing and in the furnishing of facilities and services in relation to that housing.

Rooms are available to both undergraduate and graduate students enrolled at IUP. Each year the university reviews its housing policies and revises them according to its needs for the coming year. The Office of Housing and Residence Life is also responsible for making room assignments, contracting for dining service, and providing information and services related to off-campus housing. The Office of Housing and Residence Life is located in G14 Sutton Hall, ext. 2696.

University Residence Halls

The specific programs and services provided within the residence halls are aimed at fostering the total development of individuals and student groups. Respect for the learning process as well as respect for self, others, and property is strongly emphasized. Students are encouraged to question and explore increasingly complex intellectual and personal challenges in their efforts to give meaning and direction to their lives. Staff members actively provide support and challenge students as they assume ownership and accept responsibility for their actions and important life decisions. The residence halls represent and reflect the daily challenges of what it is like to live in any community. It is the intention of the Office of Housing and Residence Life to teach students those skills which prepare them to be responsible community members so that when they leave the university, they will be contributing and productive citizens in the larger community in which they live.

Because residence hall living is seen as a positive educational experience, first-year students are encouraged to live in residence halls unless they are commuting from home. In an effort to make residence hall living more responsive to individual needs, the university offers two living arrangements: single sex and coed. Students are encouraged to consider these options carefully and to select the one in which they would feel most comfortable.

Student accommodations are based on double occupancy. Furnishings include beds, mattresses, desks, chairs, mirrors, and dressers. Students should bring their own blankets, bedspreads, towels, study lamps, pillows, and mattress pads.

All IUP residence halls are equipped with study lounges, recreational equipment, laundry facilities, and locked mailboxes. In addition, computer terminals and other specialized equipment are located within each area for student use. Each resident has a card key for his/her building which provides entry after closing hours.

IUP also operates two apartment buildings, providing single student housing in an apartment-style setting. The university provides telephone service, a stove, refrigerator, kitchen table and chairs, beds, and dressers in each apartment. Living room furniture is provided in Campus Towers only.

Application for Housing

New first-year and transfer students accepted by the Admissions Office as residence students are billed for an advance deposit in April, one-half of which serves as a housing prepayment. A "Residence Hall Contract for Housing and Dining Service" accompanies that mailing and must be returned to IUP with the deposit payment.

Continuing students may contract for university housing for each year in accordance with the procedure published and posted in February by the Office of Housing and Residence Life.

Students being readmitted should contact the Office of Housing and Residence Life directly for housing applications and/or information.

Dining Services

Dining service is available to all students. Students residing in university residence halls are required to have a meal plan and may choose from Plan A or B. Students residing off campus, or in university apartments, may choose Plans A, B, C, D, or E.

Plan A — 20 meals per week
(breakfast, lunch, and dinner Monday through Saturday, brunch and dinner on Sunday)

Plan B — Any 14 meals per week
(Sunday through Saturday)

Plan C — 10 meals per week
(lunch and dinner Monday through Friday)

Plan D — 5 meals per week
(lunch only Monday through Friday)

Plan E — Any 10 meals per week
(Sunday through Saturday)

Students and guests may purchase individual meals in either of IUP's dining halls at the current casual meal rate. Meals can also be purchased at 1) the Oak Room, an on-campus faculty/staff dining room; 2) the Underground Express, both of which are located within the lower level of Foster Hall; 3) Itza Pizza, located in the Underground Express; and 4) the HUB Rock Cafe, located in the Hadley Union Building.

Insurance for Personal Belongings

Students are encouraged to carry insurance that covers the loss or theft of money or property while residing in a residence hall/apartment housing. Students are encouraged to determine coverage available through their parents' homeowners policy and consider a rider if necessary to provide the appropriate coverage while at college. The university does not assume responsibility for loss to students' belongings.

Student Room Refrigerators

Residents can rent refrigerators for their rooms on a one- or two-semester basis from the Office of Housing and Residence Life. Students directly benefit from this program, since the profits are used to upgrade special facilities in the residence halls. Residents can also use their own refrigerators as long as the unit does not draw more than three amps of electrical current and not does occupy more than 2.4 cubic feet of space.

Student Room Telephone Service

Touch-tone line service is provided for each student residence hall room and apartment. Students, however, are responsible for providing their own telephone instruments. A touch-tone telephone is strongly recommended in order that students will be able to use expanded services such as the telephone class registration. Rotary or simulated touch-tone telephones will permit standard services only.

Telephone bills are mailed directly to residence hall rooms each month. Toll calls and telegram charges only appear on the bill. Both/all occupants of a room are responsible for all charges made to their Centrex extension. Payment is made directly to Bell Telephone of Pennsylvania.

Automobiles

Students, faculty, and staff members who park vehicles in campus parking areas must register their vehicles with the Campus Police Office. Resident students will be issued parking permits for the following reasons: medical necessity, work assignments requiring a vehicle, student teaching, or other academic need for a vehicle. A written application must be submitted to and approved by the Parking Authority Review Board. Parking will be available to resident students not meeting the aforementioned criteria, for a fee, to park in the Robertshaw lot. The Campus Police Office located in Sutton Hall should be contacted for information on parking as well as copies of the current rules and regulations.

Counseling and Student Development Center

Counselors, psychologists, and student development specialists offer services and programs which facilitate the personal and emotional growth of students. Confidential counseling is available on an individual and small-group basis. The opportunity to develop skills for lifelong learning is provided through individual programs, workshops, ongoing groups, and computer-based instructional packages. Student leadership training, new student orientation, women's programs, student satisfaction research, and individualized programs for special populations are provided.

The center is open from 8:00 a.m. through 4:30 p.m., Monday through Friday. Students may call 357-2621 to arrange for an appointment. After hours, staff may be contacted for emergencies by calling the Health Center at 357-2550.

Learning Center/Act 101

The Learning Center provides educational support services for all IUP students in the areas of reading, writing, mathematics, biological and physical sciences, foreign languages, social sciences, study skills, and related areas. These services are provided by both professional and undergraduate paraprofessional staff. Students are encouraged to participate in a broad array of program services including one-to-one and group tutorials, workshops, and formal classes. The main Learning Center office is located in 203 Pratt Hall. Further information can be obtained by calling 357-2729.

The Act 101 program, created as a result of the Pennsylvania Higher Education Equal Opportunity Act 101 in 1971 by the legislature of the commonwealth, focuses on servicing IUP students in order to make the ideal of "equal educational opportunity" a reality for all qualified students. Students matriculating through the LC/Act 101 program are provided assistance in the areas of academic tutoring, career counseling, financial aid information, personal counseling, academic advising related to curriculum concerns, the selection of an appropriate major, and course scheduling. The main Act 101 office is located in 203 Pratt Hall. Further information can be obtained by calling 357-2729.

Health Services

The University Health Service operates an outpatient clinic and provides routine health care to students while classes are in session. The outpatient clinic is staffed with physicians, nurse practitioners, nurses, and educators. For emergency care of students when the Health Center is closed, the local hospital emergency room is available. The university has a contract to cover the cost of transporting a student to the local hospital for an emergency, if the student's health insurance policy does not include coverage of ambulance services.

In addition to primary medical care including minor surgery, some laboratory tests, allergy injections, and dispensing of medications, the University Health Service offers a self-care cold clinic, evening contraceptive clinic, and programs in chemical health, health education, wellness, and nutrition counseling. Free transportation to area medical facilities is available.

Students pay a $55 per semester mandatory student health fee which entitles them to unlimited visits at the Health Center and includes: medications dispensed, laboratory tests, and other procedures.

Effective Fall, 1991, IUP requires documentation of dates of immunizations from new students for the following vaccines: measles, mumps, rubella, tetanus toxoid-diphtheria, and polio. Individuals born after 1956 should receive a second measles immunization prior to entering college. It has always been important to update diphtheria and tetanus immunizations every ten years. The documentation must be included on the **Student Health Form** and can take the form of:

1. dates of vaccinations by the health care provider who gave them or
2. date of illness with the disease diagnosed by a physician or
3. serum antibody level as determined by a blood test

Students will receive a copy of the **Student Health Form** from the Health Service after they receive notification of admission to IUP. The form must be returned to the University Health Services before starting classes.

Student Health Insurance

The university does not sponsor a group student health insurance plan. Students are encouraged to obtain private insurance to cover the costs of hospital-related expenses. The University Health Service does not bill insurance companies for services. However, students receive a copy of each visit which can be used if the individual chooses to bill his/her insurance company directly.

Services for Students with Disabilities

Disabled Student Services (a unit of the Advising and Testing Center) is the primary agent for the provision of access for IUP students with physical and learning disabilities. Students with disabilities are urged to register with the office. Services provided include early registration; assistance in locating accessible housing; equipment loan; test proctoring and reading; notetaking; recording of books; NCR paper; liaison with faculty, OVR, and BVS; and general advising and counseling. Further information may be obtained in 106 Pratt Hall or by calling (412) 357-4067 (VITD).

Speech and Hearing Clinic

The Speech and Hearing Clinic, located in Davis Hall, offers diagnosis of speech problems, hearing tests and evaluations, and a regular program of therapy. The clinic also administers the speech clearance for teacher education programs.

These services are made available without charge to students regularly enrolled at the university to give the necessary assistance to alleviate deficiencies which would interfere with successful performance and progress in the university and in future work. Students are encouraged to use the facilities provided for them and may of their own initiative come to the clinic for help, or they may be referred by any faculty member or university official.

Career Services

Career services are available to students who are graduating, students who are enrolled to obtain teacher certification, students who have been accepted as candidates for degrees in the Graduate School, and alumni. Additionally, career counseling is provided to students of all class levels as well as alumni. In addition to career counseling, the primary functions of the office are to transmit credentials to prospective employers, arrange for campus interviews, prepare a current file of job opportunities, maintain an extensive library of occupational information, conduct follow-up studies of graduates, conduct group counseling and orientation meetings, and provide general assistance in the career planning and job-seeking process.

The Office of Career Services also receives and makes available to graduates and undergraduates information concerning summer employment.

Positions are not guaranteed by the university, but IUP's record of placement is one of the very best in Pennsylvania.

Veterans

A prospective veteran student should contact the veterans counselor and submit to the counselor the veteran's certificate for Program of Education.

Veterans eligible for the G.I. Bill should report to the office of the veterans counselor in Pratt Hall prior to registration for a semester or for summer sessions to be entered or continued in training for Veterans Administration benefits purposes.

No veteran receiving G.I. benefits may change curriculum without clearance from the veterans counselor. All veterans must maintain normal class progression and report any change in course load to the veterans counselor. Any undergraduate receiving benefits from the Veterans Administration must carry at least twelve credit hours during a regular semester in order to be considered a full-time student by the Veterans Administration. The minimum full-time requirement for a graduate student is nine credit hours.

Children of a deceased or disabled veteran whose death or injury was due to service-related causes may be eligible for educational assistance from the federal government under Public Law 634 (Dependents Educational Assistance Act). Immediately upon acceptance to IUP, men and women who qualify for such assistance should contact the veterans counselor to process their application for payment.

Guidelines for Student Conduct

IUP is an academic community within the society at large. As a community, it has formulated a code of standards and expectations which the university considers to be consistent with its purpose as an educational institution. IUP reaffirms the principle of students' freedom coupled with an acceptance of full responsibility for one's behavior and the consequences of such behavior. As a member of the academic community and of the larger society, a student retains the rights, protections, guarantees, and responsibilities which are held by all citizens.

The judicial system of IUP exists to review all alleged academic violations as well as violations of university regulations and/or federal, state, and local ordinances. The primary intent of this educational system is to create a positive behavioral change in the students while also protecting the rights of the members of the university community. The system will hold the students accountable for their actions when regulations or statutes have been violated. A complete statement of regulations is available in the student handbook.

Post Office

The University Post Office is located on the ground floor of Folger Hall, at the corner of Pratt Drive and Maple Street. All United States and campus mail is picked up and delivered daily to administrative offices and residence halls from this location. As it is a contract station of the Indiana, Pennsylvania, post office, the University Post Office also provides a window service for university personnel for all postal services including box rentals.

Student Cooperative Association

The Student Cooperative Association has played an extremely broad role in the cocurricular life of the university for more than sixty years. All students, faculty, and staff, by virtue of paying the Activity Fee, are members of the association. Virtually all campuswide activities outside the instructional program are sponsored wholly or in part by the association.

The Activity Fee is the chief source of income for the association's programs. The student's "I-Card" will admit him/her free of charge or at a reduced fee to university social, cultural, and athletic events. Other income for the association comes from the profits of the Co-op Store and income from events sponsored by the association.

The Student Cooperative Association operates the Hadley Union Building, which houses the Co-op Store, and the Co-op Recreational Park. The Hadley Union Building, built by association members through the Activity Fee, offers many facilities for use by the university community.

The Co-op Recreational Park comprises 270 acres of wooded hillsides and fields. Included are a lodge building which will accommodate groups of up to 200 people, a ski facility with two rope tows, toboggan run, cross-country skiing and nature trails, picnic shelter, and garden plots.

Cocurricular Activities and Student Organizations

As participating members of the IUP community, students occupy a responsible role in governance of the campus. Since a valuable part of education lies in participation in groups where experience in leadership, social and community responsibility, intellectual curiosity, and religious interests can be met, voluntary participation in varied organizations is available and encouraged.

There are currently more than 180 active student organizations at IUP advised by faculty or staff selected by the students. Students are also encouraged to initiate and support new groups which reflect interests not represented by existing organizations.

Student Congress

The Student Congress is the representative and recognized voice of IUP's student body. The Student Congress was created in the spring of 1989 to be a unified student voice in a bicameral (two-house) arrangement. Seats are reserved in the House of Representatives for each of the eight students elected to the Student Cooperative Association's Board of Directors. The Congress is led by a president elected at-large in a spring general election; the president is a member of neither the House nor Senate. The sixty-four member House is led by an internally elected vice-president. Its primary responsibility lies with the student members of the Co-op Board of Directors and with their internal appointments to the Co-op Finance Committee which allocates the $300,000 supporting recognized organizations and activities on campus. The forty-two-member Senate is also led by an internally elected vice-president. This vice-president becomes the student nominee for the position of vice chair of the University Senate. Each student senator serves as a member of the University

Senate, which is also composed of faculty and administration. The primary responsibilities of the student senators lie with their seats on University Senate committees, which address IUP policy. The Student Congress meets twice monthly as an assembly. Every student enrolled at IUP is considered a member of the SC, and input is always sought and valued.

Residence Hall Association

The Residence Hall Association (RHA) is made up of all students living in university residence halls. The executive body of RHA is composed of elected representatives from each residence hall. The purpose of RHA is to provide educational, social, and community service programs for residents; to collect information on various aspects of residence hall life; and to assist in formulating housing policies and procedures.

Activities

Under the supervision of the Office of Student Activities and Organizations and funded for the most part by the Student Cooperative Association, IUP has many activities which are orchestrated by students and which offer entertainment and cultural programs for the entire university community. These activities provide a significant opportunity for students to become more involved with their campus as well as to experience the growth and personal development which involvement provides.

Organizations and activities sponsoring the majority of IUP events include The Entertainment Network (TEN), Artist Series, Black Cultural Center, Black Emphasis Committee, Ideas and Issues Series, Summer Activities, and the University Concert Committee. Participation in these and other groups is strongly encouraged.

Student Publications

The Penn, IUP's campus newspaper, is published three times a week during the fall and spring semesters by students wishing to gain practical newspaper experience. Interested students are advised to attend organizational meetings held in the beginning of each semester.

The Oak is the university yearbook, a pictorial and written review of the year's activities. Subscriptions may be purchased in the fall or early in the Spring Semester. *The Penn* will carry notices of subscription drives. Applications for staff positions may be obtained from the *Oak* office or from the adviser.

The University Directory is distributed early in the fall term to students and faculty. It contains a listing of all properly registered students and of staff, faculty, and university offices.

The Student Handbook is distributed to all students free of charge. It includes rules and regulations, the extracurricular program, and general information of interest to students.

Athletics

Frank Cignetti, Director; Herm Sledzik, Associate Director

Head Coaches: Kurt Kanaskie, Men's Basketball; Jan Kiger, Women's Basketball; Ed Fry, Men's and Women's Cross Country; Frank Cignetti, Football; Kofie Montgomery, Women's Field Hockey; Fred Joseph, Golf; Lori Henkemeyer, Gymnastics; Erika Renwick, Softball; Frances Nee, Men's and Women's Swimming and Diving; Jackie Albenze, Women's Tennis; Ed Fry, Men's and Women's Track and Field. To be appointed: Baseball, Volleyball.

The university's men's and women's athletic teams compete at the Division II level of the National Collegiate Athletic Association and in the Pennsylvania State Athletic Conference.

Men's sports offered in the fall include cross country and football. The winter sports include basketball and swimming and diving. The spring sports are track and field, golf, and baseball.

Women's fall sports are tennis, cross country, gymnastics, volleyball, and field hockey. In the winter, the sports of basketball and swimming and diving are offered. Spring sports include softball and track and field.

Intramurals

A well-organized and varied program of intramural sports and athletic activities is conducted for both men and women and on a coeducational basis. Intramural handbooks are available from the intramural director, Room 101, Memorial Field House.

Religious Life

The religious life of students is cared for through the activities of some twelve organizations which comprise the IUP Interfaith Council. Three of these, the Newman Center, the United Campus Ministry, and the Lutheran Center, maintain private facilities near the campus. Others affiliate with and meet in local churches for worship and meetings.

The Advising and Testing Center

The Advising and Testing Center is available to provide assistance to both students and faculty. Among its functions are implementing the summer pre-registration testing program; offering career planning classes and computer-assisted career counseling to undecided majors; co-conducting registration for January freshmen and branch campus students; processing total university withdrawals; serving the needs of students with disabilities; and assisting in providing advising information to students and advisers. The Advising and Testing Center may be contacted at 357-4067 (VITD) (106 Pratt Hall) for further information.

Academic Policies

Classification of Students

In order to be classified as full-time, undergraduate students attending any regular academic year semester must be currently enrolled in at least twelve semester hours of credit.

In the IUP summer sessions, a student must be currently enrolled in at least six semester hours during either session in order to be certified as a full-time enrollee for either of those scheduled instructional periods.

Full-time certification for students enrolled in instructional periods which do not conform to the regularly scheduled academic sessions will be based upon the number of enrolled semester hours during that period of enrollment (e.g., one semester hour in one week of instruction would equal the minimum full-time certification standard).

For purposes of designating students by class, the following credit-hour classification ranges are used:

Freshmen	28 semester hours or less
Sophomores	29-56 semester hours
Juniors	57-90 semester hours
Seniors	91 semester hours or more

Class designations are based on credits earned rather than credits attempted. Persons holding a degree and working for a second baccalaureate degree may be classified as seniors.

Normal Semester Hour Loads

A normal semester hour load is 15-17 semester hours. A student who wishes to schedule more than 17.5 semester hours must obtain approval from the dean of the college in which he/she is registered; approval will be predicated upon various criteria such as the student's demonstrated competencies, total courses, and specific conditions. The signed approval form must be submitted at registration or drop/add to schedule the credit(s) beyond 17.5. When taking nineteen or more credits, a student is responsible for paying a per-credit fee at the current rate for each credit beyond eighteen.

Grades and Quality Points

In the grading system, the following grades are used in reporting the standing of students at the end of each semester or summer term: A, excellent; B, good; C, average; D, passed; F, failed; I, incomplete; R, deferred; P, pass/fail (option). Regarding the option of pass/fail courses, if a student fails the course, he/she will be awarded an F and the terms of "failing" a course will prevail. The grade of R is used to indicate deferred status for certain types of continuing study courses. It must be converted within one calendar year after issuance.

The grade of I is used to record work which, so far as covered, is of passing grade but is incomplete because of personal illness or other unavoidable reason. It must be made up within 180 calendar days after issuance of the grade. The grade of W designates that the student has voluntarily withdrawn from a course within a specified period after the beginning of any regular semester. The grade of Q is assigned to all courses in a semester or sessions when a student withdraws completely from registration in the university. The W and Q grades carry no credits or quality points for the courses in which they are reported but do appear on the student's record.

Shortly after each semester or summer session, a full grade report is mailed to each student at his or her home address.

Quality points are assigned as follows: Grade A, four quality points per semester hour; B, three quality points per semester hour; C, two quality points per semester hour; D, one quality point per semester hour; and F, no quality points.

Quality points are not counted on grades from other schools, and a student transferring from another school is held responsible for quality points only on work taken in this university.

Cumulative Quality-Point Average is determined by multiplying the credit hours per course by the grade in quality points received for that course, repeating this procedure for each course attempted, totaling the credit hour quality points thus obtained, and dividing by the total number of credit hours attempted.

Institutional Credits are associated with remedial courses which are numbered below 100. Credits from institutional credit courses do not apply to degree requirements for graduation but are used in determining enrollment status (full or part time) including financial aid and athletic (NCAA) eligibility.

Course Repeats

The semester hours for a course repeated after January 1, 1974, shall be counted only once for all attempts; it is this number of hours that will be used in quality-point average (QPA) computation. (In the case where a course is repeated for a different number of hours of credit than when taken initially, the number of hours corresponding to the highest grade will be used in the QPA computations.) It should be noted that the transcript continues to carry the full, unabridged record, with no deletion of repeated courses from the visual record.

The total quality points for all attempts of the repeated course will be the number assigned for the highest grade earned.

The QPA for the repeated course will be determined by dividing the number of quality points by the number of semester hours earned. Only courses with a D or F grade may be repeated and then only with the approval of the student's adviser. Only six repeat attempts may be made subsequent to the adoption of this policy during a baccalaureate degree program.

A course taken at another university will not be applicable to IUP's D/F Repeat Policy, and if credits are transferred they will block repeat of the course at IUP.

To repeat a course in which a grade of 'D' or 'F' was received, a student must file a D/F repeat form prior to repeating a course. The D/F Repeat forms, available in departmental offices, must be filed by the specified deadline by validation in the Scheduling Center, G-8C Sutton.

Pass-Fail Policy

The purpose of pass-fail is to permit a student to take an elective course in a field of personal interest where he/she may be competing with major students in the department in which the course is offered. When scheduled, such a course shall be included in the student's normal course load for the semester.

A student may take courses on a pass-fail basis to a total of fifteen semester hours throughout his/her university career. The student is limited to one pass-fail course in any given semester during the sophomore, junior, and senior years. All courses in the student's Liberal Studies program and in his/her major and minor fields are excluded from this prerogative.

The student must declare his/her intent to choose pass-fail in a specific course no later than six weeks after the beginning of the semester or the equivalent timespan in a summer session. Once declared, this pass-fail option may not be revoked. Instructors will not be notified of the identity of pass-fail students in their courses; identification will be handled by the Computer Center through an appropriate coded control.

A student shall be given academic credit without quality points for a course taken pass-fail upon receiving a passing mark in the course. The semester hours successfully completed under pass-fail ("passed"), within the overall fifteen semester hour limitation, shall be recorded as counting towards the total semester hours earned for graduation but not towards the semester-hours-attempted data used in calculation of the cumulative quality-point average. However, if a student fails a pass/fail course, he/she will receive the "F" grade and the corresponding quality-point average. An F earned under the pass/fail option may be repeated only under the graded option to provide the quality points to correspond to the "hours attempted" incurred with the F.

The summer sessions, collectively or in any combination, shall be considered a unit similar to a spring or fall semester for pass-fail purposes. Hence, a student is permitted to take only one course during the summer on a pass-fail basis.

Cancelled Semester Policy

The Cancelled Semester Policy permits students returning after significant separation from the university to delete from the Cumulative Grade-Point Average (CGPA) calculation the results of one particularly unfortunate semester. A student who has not been enrolled in four consecutive semesters and the intervening summer sessions may apply upon application for readmission or within one year of readmission for the application of this policy to any single semester completed before readmission. [For cancellation purposes, a semester is defined as any semester of enrollment, whether full or part time, with sessions in a single summer together constituting one semester.] All grades—passing, failing, withdrawals—in that semester must be cancelled from the CGPA. There is no abridgment of the transcript; the courses and grades remain visible on the official transcript. Credit toward graduation remains for those credits associated with passing grades. A student may never cancel more than one semester from his/her CGPA under this policy.

Audit Policy

To audit an undergraduate course, a person must be admitted to the university and have met course prerequisites. Students wishing to audit a course for which they registered at registration should obtain a Course Audit Form from the department chairperson of the course. To audit a course not previously registered for at registration, students must first process an "add" for the course before filing a course audit form. All audit processing, including revocation of previously requested audit classification, must be completed during the regular drop/add period. Copies of the completed form are returned to the Scheduling Center, to the department chairperson, and to the student. Audit students have the same privileges as other students in all coursework. There is no limit on the number of courses which may be audited.

All audited courses will be identified as such on the student's grade report and transcript. Work taken on an audit basis will not be graded and will not count toward the fulfillment of requirements for a degree to be awarded by IUP. Since credit hours attempted and quality points will not be awarded for audited courses, they will not affect the student's quality-point average in any way whatsoever.

Auditors will pay normal tuition and such other fees as may be required for the course.

Advanced Placement and Credit/Exemption Examinations

Courses taken by students prior to admission to college under the Advanced Placement Program of the College Entrance Examination Board may be recognized by the award of college credit or by exemption from required subjects. Those who earn a grade of 3, 4, or 5 in the Advanced Placement Examination will be granted credit toward the number of credit hours required for graduation.

For students who have had other unusual opportunities for instruction or have advanced in a given field, an opportunity to gain credit and/or exemption from a course is afforded through examinations. The University Testing Services Office (302 Pratt Hall) offers credit options through the College Level Examination Program (CLEP).

Students have an opportunity to gain exemption or credit through successful completion of comprehensive examinations by requesting from the academic department an exam as a substitute for completing all the usual requirements of the course.

A student who passes an exemption examination will be exempt from taking that course in his/her academic program. When a student receives credit for a course by examination, the credit will be applied to graduation requirements just as though the course had been taken. If a student is granted exemption only from a course, he/she will be permitted to take a free elective in place of that course.

This enables the student to further specialize, to correct weaknesses outside his/her major field, to build his/her knowledge in an ancillary area, or to introduce himself/herself to an entirely different area.

Courses for which credit or exemption are awarded by examination will not be used in the determination of quality-point averages.

Drop/Add

All changes to a student's schedule after registration utilize the drop/add procedure. Drop/add takes place at the beginning of each semester and is the procedure which allows students to drop a course without its appearing on their permanent record. A change from one section to another of the same course involves both the drop and add phases. Dates of drop/add are specified for each session. After receiving approval to either drop or add a course section from the department chairperson, the student reports to a designated site with a copy of his/her original schedule to validate the drop/add form. The student will then present the validated drop/add slips to the course instructor(s). Instructors can make no additions or deletions to class lists without validated drop/add slips. Therefore, a student who attends a class and completes course requirements without processing an "add" slip will receive no credit. Likewise, a student who does not process a "drop" slip and does not fulfill course requirements will be issued a failing grade for the course.

Individual Course Withdrawal Policy

An undergraduate student is permitted five Individual Course Withdrawls at IUP. Exceptions for unusual circumstances, if any, will be by letter of petition to the dean of the student's college, with appropriate documentation of the circumstances.

For all individual course withdrawals, the student must complete a course withdrawal form, available in department offices. This form must be signed by the student, his/her adviser, and the instructor. The completed form must be processed through the office of the dean of the student's college.

Individual course withdrawals may be processed only during the first two-thirds of the term. Instructors are required to inform students of their standing in class prior to this time. A student wishing to withdraw from a course after the deadline may request a waiver by filing an Emergency Late Course Withdrawal Request through the office of the dean of his/her college. Approval is contingent upon documentation of exceptional events of a catastrophic nature that could not have been anticipated.

Procedural note: This policy moves course withdrawal processing to the deans' offices. A SOLAR screen will be developed that enables the deans to immediately reject withdrawal requests of students who are already at the maximum limit of five and to process the rest on-line. The policy will be implemented when the appropriate computerization is complete, hopefully in January, 1994. At the time of implementation, each continuing student will have five additional individual course withdrawal options, without regard to

the number of his/her previous course withdrawals. See prior catalogs for policy in effect until 1992 policy is implemented.

Total University Withdrawal Policy

An undergraduate student who does not register for the succeeding semester or, having registered, does not appear for classes at the beginning of the succeeding semester, is considered to have withdrawn from the university. Thereafter, he/she must apply for readmission as prescribed under "Admission and Registration."

Any undergraduate student withdrawing from the university during a semester or a summer session must secure a Withdrawal Form from the Advising and Testing Center, 106 Pratt Hall (357-4067). The student will clear the form with the appropriate offices listed in the form, securing their signatures as evidence of clearance. (Students seeking medical withdrawal must also provide the Advising and Testing Center with a physician's corroboration of a medical need to withdraw.) The Withdrawal Form will then be returned to the Advising and Testing Center, which will notify the appropriate college dean, campus agencies, and instructors that an official withdrawal has been processed. No person shall be considered withdrawn from the university within a semester or summer session unless such notice is received. Grades of Q will be assigned to all registered courses in the semester/session from which the student is withdrawing. (Note: The policy will be implemented when the appropriate computerization is complete. The previous grading system will remain in effect until that time.)

Class Attendance

Class attendance and class participation beyond mere physical presence are essential for maximum educational advantage and are strongly encouraged. Responsibility for all course material rests entirely with the student, whether or not he/she attends each class. Class attendance, per se, shall not be used as a basis for awarding or altering a grade in a course. This applies to freshman through senior class levels. The exceptions to this policy apply to students enrolled in LC courses, EN100, MA100, and elementary foreign languages (levels I and II). These students are permitted a maximum of three unexcused absences during the semester. At the discretion of the individual instructor, more than three unexcused absences could result in a grade penalty, up to and including failure in the course. Also excluded from optional class attendance are students in the advanced courses of the ROTC program.

Course grade will be based on such factors as class preparation, class participation, skill development, effectiveness of oral presentations and/or written reports, quiz grades, and test and final examination scores. It is the prerogative of the instructor to administer unannounced quizzes as part of the student evaluation process and to pass judgment on the merits of all cases involving late class submissions and class requirements missed by the students.

All students are required to attend class during the first week of the semester in order to stabilize enrollments and class rosters.

Anticipated Class Absence for University Representation and Participation

The university community recognizes the values of student participation in cocurricular and extracurricular activities of the university. IUP has fostered this participation with an informal policy of good faith accommodation to meet the overlapping demands of the curricular and extracurricular commitments.

The underlying spirit of good faith accommodation ultimately is set in the faculty member's unabridged right to determine the terms of variance, if any, from the established course syllabus—tests, quizzes, due dates for papers or other assignments, projects, presentations, and all other course operations.

In seeking variance, the student must take the initiative to make all arrangements including validation of participation as needed. The student should generally assume that papers and such assignments should be completed and submitted before the anticipated class absence. Alternate arrangements for tests, quizzes, labs, or class participation activity (panels, simulations, presentations) should be sought sufficiently in advance to permit faculty/student agreement on the plan for completion, whether the actual completion is rescheduled to be prior to or subsequent to the anticipated absence.

This was approved by University Senate April 26, 1988, and Council of Trustees May 13, 1988.

Criteria Governing Continuance at IUP

Continuance at IUP is determined according to the university's Academic Standards Policy as approved by University Senate December, 1987, and Council of Trustees in February, 1988. This policy became effective July 1, 1988.

Academic Standards Policy

The Academic Standards Policy applies to all undergraduate degree candidates of the university. Academic standards for students enrolled in graduate courses and programs will be defined and administered through the Graduate School. Academic standards for participants in nondegree programs will be defined separately.

Authority to administer the Academic Standards Policy is vested in the dean of the college which has jurisdiction for the student's primary major. That responsibility may be assigned to an appropriate designee. Students officially advised by the Learning Center are reviewed by the assistant vice president for Student Affairs.

Academic Good Standing:

Every undergraduate student must maintain a cumulative 2.00 GPA to be in academic good standing. There are two review periods: January and May. Continuation of enrollment is permitted under defined circumstances.

1. January Review Period:
   The academic standing of each student is reviewed. A student whose cumulative GPA is below 2.00 is considered to be in a Probation status.

2. May Review Period:
   The academic standing of each student is reviewed. A student must have a cumulative GPA of 2.00 to be in good academic standing.
   a. For a student who matriculated during the preceding summer or September, the following criteria apply:
      - if the cumulative GPA is between 1.80 and 1.99, the student is continued on probation.
      - if the cumulative GPA is below 1.80, the student is dismissed.

   b. For a student who matriculated through the Learning Center/Act 101 during the preceding summer or September, the following criteria apply:
      - if the cumulative GPA is between 1.80 and 1.99, the student is continued on probation.
      - if the cumulative GPA is below 1.80, and the student is in compliance with the participation requirements of the Learning Center program, the student is continued on probation.
      - if the cumulative GPA is below 1.80, and the student is not in compliance with the participation requirements of the Learning Center program, the student is dismissed.

   c. For a student who matriculated in the immediately preceding semester, the following criteria apply:
      - if the cumulative GPA is below 2.00, the student is continued on probation.

   d. For all other continuing students, the following criteria apply:
      - if the cumulative GPA is below 2.00, the student is dismissed.

Probation:

1. Definition: Probation status is that status of any student who has a cumulative GPA less than 2.00 and who has permission to enroll in the university.

2. Student responsibilities:
   A student who is in Probation status is expected to meet with his/her adviser prior to or within the first week of each semester to review current course load and to establish a plan of contact for the semester. It is generally anticipated that a probation student will develop personal change strategies utilizing appropriate professional resources such as adviser, faculty, Counseling Center, Learning Center, Career Services, workshops, tutoring programs, and other support systems.

3. Additional conditions:
   As a condition of deferral of dismissal, a dean (or designee) may include specific conditions designed to promote improved academic performance.

Dismissal:

1. A student who does not meet minimum academic standards is subject to automatic dismissal in May. Dismissal is the normal consequence of cumulative performance below the academic standards as published; the office of the dean provides confirmation of dismissal status and additional information.

2. Dismissal in May includes the cancellation of previously scheduled fall classes and the elimination of guarantees associated with fall housing and dining contracts.

3. Appeal for deferral of dismissal: In certain cases extenuating circumstances may exist which in the professional judgment of the college dean or designee will warrant a brief extension of enrollment privilege at IUP. A student should understand that it is the student's responsibility to anticipate, to initiate, and to fully document and cooperate in all aspects of the process of appeal in a timely manner. The student must file in the office of the dean (or designee) the completed application for appeal with all supporting documentation pertinent to review of the appeal. All material must be filed by 4:00 p.m., June 15, to be considered for the fall semester.

Readmission:

1. All dismissed students seeking readmission must make application for readmission through the appropriate college office. A student who has been dismissed may use summer sessions at IUP in support of the application for readmission. The application will detail procedures including deadlines and information needed for consideration of readmission plan.

Sufficient progress:

The IUP Financial Aid Satisfactory Academic Progress Policy requires sufficient academic progress toward a degree on both academic good standing (GPA) and sufficient progress (percent of progress) bases. The standard of academic good standing is defined within the university's Academic Standards Policy. The standard of sufficient progress for financial aid eligibility is the successful completion of seventy-five percent (75 percent) of the cumulative number of registered credits at IUP. "Registered credits" are the number of credits for which a student is enrolled at the end of the Drop/Add period. (For a student who was originally registered and charged at full-time status and who reduced during Drop/Add to part-time status, the registered credits will be calculated as twelve.)

A student who meets the standard of academic good standing of the Academic Standards Policy but who does not meet the standard of sufficient quantitative progress may continue in university registration but without financial aid eligibility for the federal Title IV aid programs.

A full statement of requirements for Satisfactory Academic Progress for Title IV Federal Student Assistance is available through the Financial Aid Office.

All courses taken at IUP become a part of the student's permanent academic record. The record shall show hours attempted, hours earned, and quality points earned.

The academic standing of all students is computed on the basis of courses attempted at this university only. Credit is granted for work completed in other institutions in accordance with the stipulations set forth under "Admission and Registration."

Academic Honors

IUP recognizes academic achievement through Dean's Lists, Provost's Scholars, and graduation honors.

Dean's List — Undergraduate students receive recognition on the Dean's List for each semester (or summer sessions cumulatively) in which they earn at least a 3.25 quality-point average based on at least twelve credits of graded (not P/F) coursework.

Provost's Scholar — Sophomores and juniors who have a cumulative quality-point average of 3.50 and above at midyear are named Provost's Scholars and are recognized at an annual Honors Convocation, usually in April.

Graduation Honors — Traditional Latin honors are awarded at graduation to bachelor's degree candidates with appropriate academic records. Calculation is based on all undergraduate credits and quality points earned at IUP. Graduation honors are not granted for second (subsequent) degrees. The distinctions are:

Cum laude — 3.25 to 3.49 cumulative quality-point average
Magna cum laude — 3.50 to 3.74 cumulative quality-point average
Summa cum laude — 3.75 to 4.00 cumulative quality-point average

Advisory Program

A group of selected faculty members act as freshman advisers for entering freshmen in their departments. In some curriculums the advisers continue with the same group of advisees from year to year. In other curriculums the freshman advisers remain with their advisee groups only for the students' first year; under this program, the student is then assigned an academic adviser for the remaining years through to his/her degree in his/her chosen field.

Faculty advisers counsel the students on academic achievement, dropping courses, changing curriculum, student activities, study schedules, and personal problems. The adviser receives a copy of the student's permanent record at the beginning of the academic year.

Changes of Major

To qualify for change of major, a student must be in academic good standing (2.00 GPA) and must meet any other requirements specific to the major. The following majors have requirements beyond 2.00 GPA: Criminology and all teacher certification programs.

A student must indicate his/her desire to change to a new curriculum in the office of the dean of the college in which the student is registered if the curriculum change desired is from one department to another within the same college (for example, change from a mathematics major to a biology major) or in the office of the dean of the college to which the student wishes to transfer if the curriculum change is from one college to another (for example, secondary education major to biology major). In either case, the student will complete an application form that is available in the dean's office. Before seeking a curriculum change, it is advisable that the student consult with the chairpersons of both the "old" and "new" departments.

When a student changes colleges, the dean of the college (or dean's agent) into which the transfer is sought will evaluate the student's credits before approving the transfer. A copy of the evaluation will be made available to the student and his/her new adviser if a change in curriculum is effected.

In cases involving students who are veterans, the dean of the college into which transfer is sought (or dean's agent) shall give the veteran a statement of prospective approval and the effective date of the proposed changes. This statement shall also indicate the amount of extended training time the change of curriculum will entail and the amount of credit loss, if any. The veteran shall take this statement to the veteran's counselor at least one month prior to the effective date of the change. No transfer of curriculum shall be made by veterans until V.A. approval has been assured.

Sophomore Screening for Junior Status Approval

General policy at IUP permits each college to determine its own scheme for evaluating the development and progress of its major students. However, each college is expected to employ some effective procedure for such evaluation.

Several of the colleges use a procedure called "Sophomore Screening for Junior Status Approval" with the following required: All students (in such a college) enrolled in their fourth semester or who will complete fifty-seven semester hours attempted by the end of the current semester must apply for Junior Status approval by filling out an application form by the deadline date designated and announced.

All students should check with their faculty advisers to determine which colleges use "Junior Status" screening procedure and the criteria for Junior Status Approval.

Admission to Teacher Education and Certification

To improve the quality of teacher education, there is an evaluation and advisement of each student at four stages:

A. Admission to the Certification Program

Procedure
By the end of the early registration period of the student's second

semester in teacher education, he or she must file an application and personal goals essay with the major academic adviser. The adviser will review, recommend approval or denial, and forward the application to the Dean's Office, College of Education. Applications will be reviewed immediately after posting of semester grades.

Requirements
1. Completion of at least 29 semester hours. Transfer students with sufficient credits must complete one semester (12sh minimum) at IUP to establish a GPA.
2. A 2.5 overall grade-point average.
3. Clearance on Act 34 (criminal record check).
4. Completion of initial speech/hearing screening test.
5. Clearance on TB testing.
6. Review and recommendation by the major academic adviser and/or departmental committee indicating completion of specific departmental requirements.

Results
If the requirements are met, the student will be sent a letter of admission to the Teacher Certification Program by the associate dean, College of Education. At this point, the student may consider enrolling in the following courses from the professional education core: ED242 (Pre-Student Teaching Clinical Experience I), FE202 (American Education in Theory and Practice), EP202 (Educational Psychology); and CM301 (Technology for Learning and Instruction).

If the requirements are not met, the student *will not* be permitted to continue work in professional education and will be administratively removed from those courses in the professional education core for which the student registered. The student must reapply for admission to teacher education. This can be done at any point at which the student believes that deficiencies identified have been corrected and meet with established requirements.

B. Admission to Junior Standing

Procedure
The student must file an application with the office of the dean, College of Education by the end of the registration period during the semester in which he or she expects to satisfactorily complete at least fifty-seven semester hours. The adviser will review, recommend approval or denial, and forward the application to the dean's office, College of Education.

Requirements
1. Admitted to Teacher Certification.
2. Completion of at least 57 semester hours which may include accepted transfer credits.
3. A minimum cumulative grade-point average of 2.5. Transfer students with sufficient credits must complete one semester (12sh minimum) at IUP to establish a GPA.
4. Completion of EN101 or equivalency with a minimum grade of C.
5. Completion of ED242 and EP202 with a minimum grade of C.
6. Final speech/hearing clearance for students not cleared under initial evaluation.
7. Submission of a personally planned program of study on an approved form.
8. Review and recommendation by the major academic adviser and/or departmental committee indicating completion of specific departmental requirements.

Results
If the requirements are met, the student will be sent a letter of admission to Junior Standing by the associate dean, College of Education. At this point the student may take the junior-level professional educational courses which include ED342 (Pre-Student Teaching Clinical Experience II), EP377 (Educational Tests and Measurements), and ED442 (School Law) and courses in the methods of teaching.

If the requirements are not met, the student will receive a letter from the associate dean, College of Education, at the end of the semester indicating that he/she has not achieved Junior Standing and *may not* take the junior-level professional education courses. Any of the junior level professional education courses scheduled during the registration process will be administratively removed from the student's schedule. Students must reapply for Junior Standing when they believe that deficiencies indicated in the denial have been removed from their academic record.

C. Admission to Student Teaching

Procedure
The student must file an application with the office of Student Teaching and Field Experiences at least one semester before the actual experience.

Requirements
1. Admission to Junior Standing.
2. Satisfactory completion of at least 91 semester hours with a cumulative grade-point average of 2.5 or higher. Transfer students with sufficient credits must complete one semester (12sh minimum) at IUP to establish a GPA.
3. Completion of the Liberal Studies science requirement courses with a minimum grade of C in each.
4. Completion of the Liberal Studies mathematics requirement course with a minimum grade of C.
5. Completion of all the required professional education core courses with a minimum grade of C in each. These include CM301, FE202, EP202, ED242, ED342, EP377 (where required), and methods course in major area.
6. Affirmative recommendation by the student's major departmental adviser or program coordinator.
7. Completion of the Special Education Competency requirement (pass Special Education competency test or pass EX300: Education of the Exceptional in the Regular Classroom).
8. Final clearance on Act 34 (criminal record check). (This clearance is good for one year and is required of all persons working with children in public school settings.)
9. Satisfaction of supplemental department requirements, if any, as approved by Senate and described in the department section of the undergraduate catalog.
10. Review and recommendation by the major academic adviser and/or departmental committee indicating completion of specific departmental requirements.

Results
If the requirements are met, the director of Student Teaching and Field Experiences will confirm approval by letter and process the student teaching placement. It is the student's responsibility to formally register for student teaching during the early registration process.

If the requirements *are not* met, the student will be informed of the denial by letter and administratively removed from the student teaching placement. The student may not register for student teaching until deficiencies are removed from the student's academic record.

D. Recommendation for Certification

Procedure
Complete application for the Pennsylvania Department of Education Certification and file with the office of Student Teaching and Field Experiences by the listed dates appropriate to the anticipated date of graduation.

Requirements
1. A minimum grade of C in all professional education courses and an overall grade-point average of 2.5.
2. Review and recommendation by the major academic adviser indicating completion of all departmental teacher education requirements.
3. Completion of student teaching with a minimum grade of C.
4. Successful completion of the NTE Core Battery and NTE Specialty Area tests.

Appeal Provision
A student who believes that any requirement of this policy has been inequitably applied or that he/she merits special consideration may appeal through the proper channels: academic adviser, chairperson, College of Education dean (or designee), teacher education appeals committee. Appeals must be made before the end of the next regular academic semester following the application.

Every effort should be made to resolve the appeal through the process so described. If, at the conclusion, the student is still in disagreement with the findings, the student may request review before a special Teacher Education Appeals Committee. The committee will be composed of three voting members representing the faculty, cooperating teachers, and students to be elected each year by the Teacher Education Coordinating Committee.

To initiate an appeal, the student must file a form obtained at the dean's office, College of Education. Appeals will be heard only during the regular academic semester. The student will be expected to submit written documentation of his/her complaint about the process of review for continuation or eligibility in the teacher education program. The committee will review the materials and make its recommendation to the dean, College of Education. A final decision rests with the dean of the college, who is the certification officer.

End Notes
In all cases where adviser action is required, a department may choose to use a committee or other departmentally approved process. In cases where recommendations are supplied by someone other than the academic adviser, the department needs to place a copy of its policy and procedures on file with the dean of the College of Education.

Some departments have additional Junior Standing requirements in place. Departments may continue to apply those requirements but need to keep a current copy of these requirements on file with the dean of the College of Education.

The policy as here stated applies to all students applying to Teacher Certification Programs on or after September 1, 1988, and includes updated procedures and editorial revisions as submitted to the University Senate in May, 1990, and May, 1992.

E. Removal of a Student Teacher from a Student Teaching Placement

Purpose:
To establish reasons or a process for removal of a student teacher from the student teaching assignment. The first two items are consistent with Act 34, Criminal Record Check; item 3 establishes a procedure if student behavior is not consistent with appropriate expectations of the school district; item 4 establishes a process and assures that the student teacher learns of unsatisfactory progress as early as possible; and item 5 an appeal process.

Policy:
Student teachers are ultimately guests of the cooperating school districts and may be removed by the district officers. A student teacher may also be removed by IUP from the student teaching assignment for any of the following reasons:

1. If **indicted** for a felony which is covered in the School Code and Act 34, there shall be a removal of the student teacher from the school assignment until the mattered is cleared. When the student is cleared of the indictment, the student teaching assignment will be extended to cover the time missed during student teaching.
2. If convicted of a felony **which is covered in the School Code and Act 34**, the student teacher will be withdrawn from the student teaching assignment and will forfeit the time spent during the student teaching assignment.
3. If the behavior exhibited by the student teacher is not acceptable to the school district, it should be documented by the school administrator/principal in collaboration with the cooperating teacher and the university supervisor/coordinator and director, Student Teaching Office. If after discussion with the student, improvement is evidenced, no further action will be taken by the Student Teaching Office.
4. If it is determined either by the cooperating teacher oruniversity supervisor that the teaching competency of the student teacher is at an unsatisfactory level based on the teaching competencies indicated on the evaluation form and not in the best interest of the students, a three-way conference of cooperating teacher, university supervisor, and student will be held to discuss the concern, possible, outcomes, and remedial strategies. **If after consultation with university director of Student Teaching, removal from this student teaching placement is necessary, this action shall be done by the director of Student Teaching and the dean of the College of Education**

   This behavior should be documented and discussed as early in the student teaching experience as possible.

Decisions made under this policy may be appealed to the dean, College of Education (certification officer).

Internship/Cooperative Education

Many departments of the university have developed internship/cooperative education programs which allow a student to participate in university-supervised work experiences for variable academic credit. Internships/co-ops are viewed as an integral part of a student's academic preparation. An internship/co-op gives the student an opportunity to apply theoretical and philosophical tenets of a discipline in a practical job experience related to the student's academic program.

Students may apply for an internship if they have completed 57 semester hours and have at least a 2.0 QPA. Internship sites are normally located within a 500-mile radius of the campus. Overseas placements are located near an IUP center. Internships are available in state and federal offices; businesses at the local, state, and national level; state-related agencies; corporations; and foundations.

Students may apply for a co-op if they have completed 30 semester hours and have at least a 2.0 QPA. Two experiences are required. Sites are national and international. Placements parallel those of the internship program.

Students who are eligible for financial aid may receive federal and state funding while participating in an internship. Students must apply to the Relating Experience to Academic Learning Program (REAL).

Because internships are viewed as an integral part of the student's academic program, students who are interested in specific internship programs should consult with the internship adviser in the department of their major. A maximum of 12 credits is applicable to an undergraduate degree program from any combination of co-op and internship experiences.

For general information about university internships, placement options, and REAL and WCLA experiences, the student should consult the director of Experiential Education and the Employment section of the Financial Aid information in this catalog.

Reserve Officers Training Corps

The United States Army established a unit of the Reserve Officers Training Corps at the university in 1950. In fulfilling the university's three-credit Liberal Studies requirement in Health and Wellness for graduation, students may take four credits of Military Science and receive full credit for the Health and Physical Education requirement. Enrollment in the four-credit ROTC option incurs no military obligation whatsoever and allows the student the option of competing for a three-year ROTC Scholarship.

Upon graduation from the university and successful completion of the Advanced Course ROTC program, the student will receive a commission as a second lieutenant and serve from three months to three years on active duty, depending on active Army requirements. As an alternative to active duty, the individual may either be chosen or volunteer to complete his/her service obligation with the Army Reserve or National Guard.

Students seeking advanced degrees can be granted an educational delay by the Army following completion of their baccalaureate degrees. Upon completion of the advanced degree, students then enter active duty or Army Reserve/National Guard duty.

Prior Learning Assessment Programs

IUP offers several methods for earning university credit for college-level learning gained through work and life experience. Through the Office of Career Services, the College Level Examination Program (CLEP) offers standardized examinations in general and specific subjects. In addition, departmental examinations are also available in specific areas on a limited basis.

Where examinations are not available, portfolio assessment may provide the student with the opportunity to present evidence of learning for evaluation by a university faculty member. Through portfolio assessment, work and life experiences are evaluated to determine their appropriateness and applicability for university credit. Credits earned through prior learning assessment may not

be applied towards university residency requirements. In addition, no more than one-half of a major may be earned by CLEP, departmental examination, and portfolio assessment. Contact the School of Continuing Education for specific details.

Policy on Prior Learning Assessment

IUP has authorized a policy for assessment of prior learning that took place outside traditional classrooms in a procedure known as Portfolio Assessment. It is particularly designed for adults with extensive documentable knowledge from work experience, travel, independent study, or other out-of-class experiences.

Portfolio Evaluation: Principles

1. Credit awarded through portfolio evaluation must conform to specific course titles listed in the IUP catalog. Credit awards for general broad areas (block credit) will not be permitted.

2. In order to request a portfolio evaluation, the student must be currently enrolled at IUP. Credit awarded must be intended for use as part of a degree or certification program.

3. Each department will determine the maximum number of credits to be awarded for prior learning for its major. In no case will more than one-half of the major be earned through CLEP, challenge examinations, and other forms of prior learning assessment.

4. Credits earned through portfolio assessment may not apply as residency credit.

5. Credit earned through portfolio assessment may be awarded only as regular course credit.

6. If a related examination is available through CLEP or if a challenge examination has previously been established for the course, a portfolio assessment of those credits will not be accepted.

7. Acceptance of portfolio assessment credits by the department will be indicated by the signature of the chairperson of the department offering the course. The dean of the appropriate IUP college and the dean of the School of Continuing Education must also indicate approval.

8. Students may qualify solely for undergraduate credit—not graduate credit.

9. The title of the course, the semester hours, as well as the indication that credit was earned through Assessment of Prior Learning, will be recorded on the academic record. An appropriate code to reflect a satisfactory grade will be assigned if the portfolio is acceptable.

Portfolio Evaluation: Procedures

1. Student meets with assistant dean for Credit Programs in the School of Continuing Education to determine the feasibility of earning credit through portfolio evaluation. Standard outlines of related courses are provided to student.

2. Preliminary Application Form — Student must provide a resume and answer the following questions:
   a. What have you learned that relates to this course?
   b. Where and when have you learned it?
   c. What documentation do you have that supports the claim?

3. A handbook to assist students in compiling a portfolio will be printed. It will show how to relate to the written portfolio learning gained through work experience, independent study, and other experiences. Evidence of learning through documentation of experience, completion of a project, and written examination will be explained. If there is sufficient demand, a workshop will be conducted to assist students.

4. Fees
   Application Fee per Assessment: $15.00
   Assessment Fee: one half the current rate of tuition per credit for each credit requested; to be paid when portfolio is submitted for evaluation.

5. The application will be submitted to the assistant dean for Credit Programs. Upon approval, the chairperson of the department offering the course will be requested to suggest the name of a faculty member to the dean of the college for approval.

6. The faculty member will meet with the student to determine the technique of assessment or a combination of techniques to be used, including interviews, documentation, observation of performance, examination, etc.

7. After the portfolio has been prepared by the student, it will be submitted to the dean of the School of Continuing Education for review, then forwarded to the appointed faculty member for assessment.

8. The faculty member will evaluate the portfolio, then make a recommendation for or against the award of credit and the amount of credit in the form of a letter, which must be approved and countersigned by the chairperson of the department offering the course. The portfolio will be forwarded to the dean of the college which oversees the student's curriculum to approve and verify that the course will be accepted as part of the student's program. Finally, the portfolio is sent to the assistant dean of the School of Continuing Education, who will notify the student and the registrar.

9. The registrar will list the course title, credit, and an indication that credit was earned through Assessment of Prior Learning. An appropriate code to reflect a satisfactory (S) grade will be assigned if the portfolio is acceptable.

Academic Integrity Policy

A. Introduction

IUP is an academic community within the society at large. All members within this community are expected to accept the responsibility for academic integrity and honesty. Academic dishonesty seriously erodes the quality of educational pursuits and is unacceptable at IUP. The following policies and procedures have been established to preserve the academic integrity of the university community, while also providing a process that protects the rights of students who allegedly violate these policies.

B. Types of Violations

Academic dishonesty includes but is not limited to the following:

1. Providing or receiving unauthorized assistance in coursework, lab work, or during examinations or quizzes.
2. Using unauthorized materials or devices, such as crib notes, during examinations or quizzes.
3. Plagiarizing term papers, essays, reports, speeches and oral presentations, take-home examinations, computer projects, and other academic exercises by misrepresenting or passing off the ideas, words, formulas, or data of another as one's own. Examples include but are not limited to: incorporating verbatim or nearly verbatim portions of other sources into assignments without using quotation marks and specifying the sources of the material; incorporating ideas from other sources into assignments without acknowledging the source of the ideas.
4. Possessing course examination materials before the administration of the exam, without the prior knowledge or consent of the instructor.
5. Intentionally evading IUP academic policies and procedures; for example improperly processing course withdrawals, grade changes, or other academic procedures.
6. Falsifying information, including forging signatures on various forms and documents, or altering or adding answers on academic exercises or exams after work has been graded.
7. Computer dishonesty, including: tampering with or making unauthorized change to another person's or the university's computer system, illegally copying computer software, any use of another person's computer account, unauthorized activity involving another individual's personal computer system or any system belonging to the university, and other unauthorized use or violations involving computer use.
8. Noncompliance: failure to follow through with sanction(s) imposed as a result of an academic violation.

C. Procedures

Charges of academic dishonesty may be brought by faculty members or administrators. Students who observe or become aware of an incident of academic dishonesty by another student are strongly encouraged to report it to a university official. **Sanction(s) may not be imposed upon a student believed to have engaged in academic dishonesty without following one of the processes outlined in this policy.**

A faculty member or administrator who believes that a student has violated an academic policy may elect any of the following procedures to resolve the matter:

1. Option I: Informal Resolution
   a. The faculty member or administrator and student may meet informally within five class days of the observation or discovery of the incident and agree to resolve the issue without submitting any formal documentation. It is **recommended** that the faculty member or administrator complete a statement that summarizes the conference which led to the resolution. This factual statement should be signed by both parties and copies provided to the student and the faculty member or administrator. If agreement cannot be reached, or at the discretion of the faculty member, a more formal process as outlined in this policy may be initiated.

2. Option II: Resolution by Documented Agreement
   a. The faculty member or administrator may schedule a conference with the student in an attempt to agree on the facts of the case and to reach a mutually agreeable resolution. This meeting must be scheduled/requested within five class days of the observation or discovery of the alleged violation or of the failure of resolution by Option I. If an agreement is reached, the faculty member or administrator must complete a Documented Agreement Form outlining the agreement and have it signed by both parties. Copies are distributed to the student, the faculty member or administrator filing the agreement, and the assistant to the vice president for Student Affairs. The form must be filed within five class days of the conference.
   b. Once the agreement has been reached and the form is filed, the matter is closed. **By signing off on the agreement, the student is waiving the right to appeal the sanctions agreed upon in the conference.** If the student fails to fulfill the written agreement, the faculty member or administrator may file an academic dishonesty referral against the student for noncompliance.
   c. If a documented agreement resolution is reached, no formal academic violation report is filed. If this is the student's first offense, the resolution agreement remains part of the student's internal university record and is maintained on file as indicated in the recordkeeping section of this policy (See section F.2).
   d. If a documented agreement is not reached, the faculty member or administrator should initiate the formal adjudication process by filing an academic dishonesty referral form with the assistant to the vice president for Student Affairs within five class days of the conference with the student.

3. Option III: Resolution by Formal Adjudication
   A faculty member or administrator should pursue formal resolution of academic violations if:
   - he/she cannot reach or chooses not to attempt a mutually agreeable resolution with the student regarding the facts of the case or sanctions to be imposed;
   - he/she believes that suspension or expulsion is an appropriate sanction due to the severity of the violation; or
   - the faculty member or administrator is aware that the student has previously violated this policy.

   a. The faculty member or administrator should file an academic dishonesty referral form with the assistant to the vice president for Student Affairs within five class days of the observation or discovery of the violation, or within five class days of the documented agreement resolution conference if an agreement could not be reached. In any case, the referral must be filed no more than ten class days from the observation or discovery of the incident.
   b. This referral must describe in detail the alleged violation and the recommended sanctions if the student is found to have violated the policy. Upon receipt of the academic dishonesty referral, the assistant to the vice president for Student Affairs will review the allegation and determine if the student has a previous violation. If the student has no previous violation, the assistant to the vice president for Student Affairs will notify the student of the allegation and instruct him/her to follow the adjudication procedures outlined in this section (C.3). If the student does have a previous violation, the assistant to the vice president for Student Affairs will instruct the student to follow adjudication procedures outlined under the Multiple Violations section (D.3) of this policy.
   c. Within five class days of receiving notification of the allegation (first offense), the student must request that the department chair schedule a hearing to review the facts surrounding the allegation and recommended sanctions if the student is found to have committed a violation. This hearing will involve the student, the chair, and the faculty member; the chair may invite others if mutually agreeable. Guidelines for academic dishonesty hearings parallel those for judicial hearings found in the IUP judicial system policy. Refer to "General Guidelines for Judicial Hearings" in the judicial system information in *The Student Handbook*.
   d. If the student fails to contact the department chair within the five class days to schedule the hearing, the sanction recommended by the person filing the referral will automatically be imposed. If the student fails to appear when a hearing has been scheduled, the hearing will be held in the student's absence and the department chair will render a decision based upon factual information presented by the faculty member.
   e. Following the hearing, the department chair will render a decision based on the information presented at the hearing. Within five class days of the hearing, the department chair will forward a written report summarizing the hearing that includes the outcome, the factual basis for the decisions reached, the sanction(s)to be issued, and appeal procedures. Copies of this report will be sent to the student, the faculty member or administrator, and the assistant to the vice president for Student Affairs. The chair will retain a copy for departmental files.
   f. In the event that a chairperson cannot or will not fulfill the above role, or in the event that the person filing the referral is an administrator or department chair, the assistant to the vice president for Student Affairs will determine the appropriate individual to fulfill the chair's role and inform the student.

D. Sanctions
   1. The following sanctions may be agreed upon by the student and faculty member or administrator through informal resolution or documented agreement. They may also be imposed by the department chair, hearing officer, or the University Judicial Board through formal adjudication.
      a. Single Grade Reduction: Reduction of grade or failure on project, examination, quiz, or other academic exercise on which student is alleged to have cheated. (Requires the approval of the instructor of record.)
      b. Course Grade Reduction: Reduction of course grade or failure in the course. (Requires approval of the instructor of record.)
      c. Constructive or Educational Task: A task which requires the student to examine his/her dishonest behavior and which may benefit the student, campus, or community.
      d. Letter of Warning: A warning letter may be issued indicating that the student has been found in violation of an academic policy and that failure to comply with policies in the future may result in further disciplinary action to be handled as a second offense. The letter of warning will remain in effect for a period of time as specified by the individual or board hearing the case.
      e. Disciplinary Probation: disciplinary probation, which is for a period of time specified by the individual or board hearing the case, is an indication that a student's status at the university is seriously jeopardized. During the probationary period, if the student is found in violation of another IUP policy, a more serious sanction will be levied, including possible suspension from the university.
      f. Other: Sanctions deemed appropriate and tailored to a specific violation as determined by the faculty member or administrator. Any reasonable sanction or combination of sanctions for a given violation may be agreed upon by the student and faculty member or administrator through informal resolution or documented agreement. They may also be imposed by the department chair, hearing officer, or the University Judicial Board through formal adjudication.

   2. Suspension and Expulsion
      The sanction of suspension can only be imposed on a student through direct action of the University Judicial Board or by recommendation of the faculty member or administrator or department chair to the assistant to the vice president for Student Affairs. Expulsion can be **recommended** by a faculty member, department chair or

administrator, but can only be imposed by the vice president for Student Affairs.

a. Suspension: A student may be suspended from the university for a specified period of time, not to be less than the remainder of the current semester. Suspension requires that a student remove him/herself from university premises, not attend classes or social activities, and not be present on university or Student Cooperative Association property during the period of suspension. Suspension can be recommended to the assistant to the vice president for Student Affairs by the department chair after the hearing with the student and faculty member or administrator or imposed by the University Judicial Board, a special interim board, or the vice president for Student Affairs.

b. Expulsion: Expulsion may be considered under any of the following circumstances: when there is a very serious violation of the academic integrity policy; when a student is proven to have violated the academic integrity policy on more than one occasion; or when a student appears before the board after already having been suspended. If expulsion is deemed the appropriate sanction by the department chair or administrator, the University Judicial Board, or the assistant to the vice president for Student Affairs, a recommendation may be made to the vice president for Student Affairs that the student be expelled from the institution. Expulsion from the institution is permanent.

3. Multiple Violations

a. Students found in violation of this policy through resolution by documented agreement or through formal adjudication will be informed by the assistant to the vice president for Student Affairs that subsequent violations may result in additional sanctions, including possible suspension or expulsion from the university.

b. If a student is found to have violated academic policies a second time, the assistant to the vice president for Student Affairs will notify the student that he/she will be required to appear before the University Judicial Board or special interim board. The faculty member or administrator who filed the second referral will be asked to present information concerning the alleged violation to the board.

c. The board will review all material and hear all the information pertinent to the second violation. If the student is found in violation of the policy a second time, the board will then review all material from the student's previous academic violation to determine appropriate sanction(s).

d. The student may appeal the decision or the sanction(s) to the vice president for Student Affairs using procedures outlined in the Appeals section (E.1) of this policy. The vice president may deny or uphold the appeal, or direct the appeal to be heard by a special interim board or the University Judicial Board.

E. Appeals

Cases of academic dishonesty that are resolved through informal resolution or documented agreement cannot be appealed, as the facts of the case, the decision, and sanction(s) have been agreed to by the student and the individual making the charge. These appeal procedures apply to cases resolved through formal adjudication.

1. If after receiving the department chair's report on the outcome of the hearing, the student disagrees either with the decision, the sanction, or both, he/she may appeal to the vice president for Student Affairs within five class days of receiving the report. This appeal must be in writing and must describe in detail the grounds for the appeal. These reasons may include the following:
   a. Denial of a fair and reasonable hearing
   b. New evidence (applies when there is an acceptable reason why the information was not presented at the original hearing)
   c. Excessively harsh sanctions
2. If the student does not appeal within the five-class-day period, the recommended sanction will be automatically imposed. The faculty member may also appeal a decision of the department chair. The appeal procedures are the same as those previously outlined for the student.
3. The vice president for Student Affairs may deny or uphold the appeal or direct the appeal to be heard by a hearing officer, a special interim board, or the University Judicial Board. The hearing officer or the UJB may either accept, modify, or reduce the recommended sanction.
4. Within five class days of the appeal hearing, the hearing officer/UJB must submit a written report of the decision to the student, faculty member, department chair, and the vice president for Student Affairs. The decision of the hearing officer/UJB is deemed final and will be implemented by the vice president for Student Affairs.
5. Appeals to the sanction of expulsion must be submitted to the Office of the President. If necessary, the president will consult with legal counsel in these cases.

F. Records and Recordkeeping

1. Records of Informal Resolution
   Although no official forms are filed at this level of resolution, it is **strongly recommended** that a faculty member or administrator who reaches an informal agreement with a student puts the agreement in writing, gives the student a copy, and keeps a copy for his/her files.
2. Records of Resolution by Documented Agreement
   The records of documented agreement resolution forms are maintained by the assistant to the vice president for Student Affairs. They are not considered formal disciplinary records until and unless the student is found in violation of this policy a second time. They are internal university records used for monitoring students for multiple violations only. If a second documented agreement form is filed or a student is found in violation of the policy through formal adjudication, the student will then have a formal disciplinary record which includes records of both violations. This formal record is maintained according to the IUP judicial system recordkeeping policies.
3. Records of Formal Adjudication
   Records of academic dishonesty cases resolved through formal adjudication are kept on file in the Office of the Assistant to the Vice President for Student Affairs. They are maintained as formal disciplinary records in accordance with IUP judicial system recordkeeping policies.

G. Operational Notes

1. In cases where a violation is alleged at or near the end of the semester and resolution by informal resolution, documented agreement, or formal adjudication cannot be completed before grades are submitted, the faculty member should submit a grade of "Incomplete" (I) for the student. The "I" grade will remain on the student's record until the case has been resolved. Once the case has been resolved, the "I" grade will be replaced with the appropriate grade.
2. If the violation is alleged during the semester when classes are in session, the accused student should continue attending all classes and continue to complete course requirements during the resolution of the academic dishonesty case.
3. The assistant to the vice president for Student Affairs may extend any deadline which cannot be met for what he/she deems legitimate reason.

The various forms described in this policy are available from the assistant to the vice president for Student Affairs, 215A Sutton Hall, deans' offices, or from the department chairs. Questions concerning the Academic Integrity Policy can be directed to the assistant to the vice president for Student Affairs, 215A Sutton Hall.

Approved University Senate 5/5/92

Night Exam Policy

All tests, examinations, and quizzes should normally be administered during the prescribed course hours. Only in this way can the essential contracted nature of the time arrangements between student and professor be preserved and, at the same time, proper provisions be made for the many extracurricular and personal activities involving students and faculty alike. Deviations to allow night exams for valid educational reasons, within the guidelines listed below, must be approved by the department and the dean.

Guidelines:

1. Night exams can only be scheduled on Monday through Thursday evenings within the 6:00 p.m.-10:00 p.m. time period.

2. Appropriate physical facilities must be arranged for in advance without encroachment upon other authorized university functions.

3. If night exams are to be given, the day of the week on which they will be given must be listed in the Undergraduate Course Schedule at the time of preregistration.

4. No night exam can take precedence over a regularly scheduled class.

5. Arrangements for nonpunitive make-up exams at a mutually agreeable time must be available for students that cannot attend the night exam.

6. For each hour of night exams, an hour of regularly scheduled class time will be cancelled. Such cancellations are prohibited during any period of two class days immediately preceding and any period of two class days immediately following holiday and/or vacation (recess) periods and semester terminations, appearing in the published academic calendar.

University Policy on Semester Course Syllabi

Each faculty member shall prepare and distribute, without charge, to each student within one week of the first meeting of the class a Semester Course Syllabus. The semester course syllabus will be consistent with course content and catalog description, which was approved by the Curriculum Committee of the University Senate for the initial course offering or revision.

The semester course syllabus is a vehicle of communication to promote student academic planning and to avoid misunderstandings of course plan and requirements.

It is recommended that each syllabus include:

a. the faculty member's name, office location, telephone number, and office hours
b. an outline of the course content, objectives, and prerequisites, as appropriate
c. information about the required textbook(s) with title, author, and edition, and any other required materials
d. information on the determination of grades, including the weight, types and scheduling of evaluations, other planned requirements, and expectation for class participation
e. statement of policies and/or penalties for make-up exams and late submission of assignments

IUP Student Grade Appeal Policy

Grade Review Policy

If a student disagrees with the evaluation of his/her work by the instructor but has no basis for a charge of "discrimination" or "capricious evaluation," the student should discuss the matter directly with the instructor, and if unsatisfied, with the department chairperson, and if still unsatisfied, with the dean of the college in which the course was offered. In such cases, the decision of the instructor shall be final.

If a student believes that an improper grade has been assigned, an appeal may be filed on the following grounds:

1. Discrimination: On the basis of race, religion, national origin, sex, age, ancestry, handicapped status, affectional or lifestyle preference, or political affiliation.

2. Capricious Evaluation: Significant and unwarranted deviation from grading procedures and course outlines set at the beginning of the course (ordinarily in a written statement during the first week of the course) or grade assigned arbitrarily on the basis of whim or impulse. The student may not claim capriciousness if he or she disagrees with the subjective professional evaluation of the instructor.

Procedures of Appeal

Level I: Informal Resolution

Every effort should be made to resolve the disagreement at Level I. The student must first seek a resolution to the disagreement with the instructor either in person or in writing. If the student is not satisfied with the results, the student must then speak with the chairperson of the department that offers the course. If still unsatisfied, the student must discuss the matter with the dean of the college in which the course is offered. A Student Congress member may accompany and advise the student during the Level I procedures. Only after all attempts for resolution at Level I have been exhausted may the student initiate Level II.

Level II: Appeal Screening

A. **Composition:** Each year there shall be appointed a Grade Appeals Committee to determine the existence of the substantive basis for appeal. The committee will be composed of seven voting members: three faculty members appointed by APSCUF, three members elected by and from the Senate Academic Committee (one faculty, one administrator, one student), and one student appointed by the Student Congress. A quorum consists of a majority of the committee. To take action, a majority of those present must be faculty.

B. **Procedure to Initiate Appeal:** To initiate Level II of the appeal, the student must file an appeal form with the Provost's Office. This form must be filed within sixty (60) calendar days of the beginning of the semester immediately following the semester in which the grade was received. The Provost's Office may extend the sixty-day limit only in unusual circumstances when equity demands it and when the student's own procrastination or misunderstanding did not substantially contribute to the delay. [Note: Grade appeals will not generally be processed during the summer. Therefore, the appeal of any grade received in the spring or summer sessions normally will be processed in the fall. A review will be scheduled in the summer only when the student's academic eligibility is jeopardized by the grade in question or when the student is a graduating senior.] The Provost's Office will notify the appropriate dean, department chairperson, faculty member, and the Student Congress president of the student's initiation of the Level II process.

C. **Procedure to Process Appeal:** The student will be expected to submit written documentation of his/her complaint and the faculty member will be expected to submit in writing the course grading procedure and any other pertinent information. Appeals based on discrimination will be reviewed according to current standards of nondiscriminatory action. Appeals based on capriciousness will be reviewed in light of the faculty member's announced evaluation and grading system. The committee will review the materials to deny or confirm appeal continuance. Denial of appeal continuance must be by a negative vote of four members of the committee. This committee will inform the Provost's Office of its findings. Within five (5) class days of the receipt of the committee's report, the provost or designee will notify the student and the faculty member of the findings. If the basis for appeal is determined to be substantive, the provost or designee will schedule a Grade Review Panel within fifteen (15) class days to be convened prior to the conclusion of the semester.

Level III: Appeal Review

A. **Composition:** The Grade Review Panel will consist of five voting members: one academic dean or associate dean and four faculty members. Four-fifths of the voting members will be a quorum. The Student Congress Academic Affairs Committee chairperson may advise as requested by the student. The affirmative action officer will advise in appeals based on discrimination. The panel will be constituted from the Grade Review Pool by random selection. The panel chairperson will be elected by and from the panel before each review.

B. **Membership:** The Grade Review Pool will be established in the spring term to serve for the following academic year. The pool and rotational order within the pool will be established by the Provost's Office. A pool of three deans or associate deans and twelve full-time faculty members will be maintained. In establishing the membership for each review panel, prior to each review the names of those designated as primary members of the specific panel and available as alternates will be supplied to all parties involved. A panel member may request (to the provost or designee) disqualification due to a conflict of interest. The student and the faculty member may eliminate names in proportion to the composition of the panel. Each may eliminate only one dean/associate dean and four faculty. The instructor and the student will be supplied a list of all primary and secondary pool members. The opportunity to disqualify panel members will take place only once. Resulting vacancies will be filled from the appropriate pool of alternates so that the panel will be composed of one dean/associate dean and four faculty. If through self-disqualification and challenges a panel cannot be constituted from the pool, then the Office of the Provost will supplement the pool using appropriate random selection methods.

C. **Procedure:**
   1. Both the student and the instructor will have the right to appear before the panel, present witnesses, and offer evidence. In addition to

those specified in Level III, Section V, each may also bring one observer, with whom they may consult but who may not participate in the review.

2. The panel shall determine its rules of order for internal operation. After hearing the evidence brought forth, the panel will privately deliberate and render a decision. If the grade appeal is upheld, the panel will constitute a committee of three appropriate faculty (ordinarily faculty from the department in which the course is offered) who will review the student's work and determine the appropriate grade or suitable remedy. The panel will incorporate this information in the determination which it then forwards to the Provost's Office for implementation. (The panel may recommend or the department may deem it appropriate that the grades of other students in the class also be reviewed.)
3. The written report sent to the Provost's Office will state whether the student's appeal is upheld or denied; if upheld, the committee's evaluation and remedy will be included. All documents supporting the report will be sealed and kept only as long as necessary to insure the appropriate action is taken (normally one year) before being destroyed or returned to the individual presenting the evidence.

Implementation

A. Faculty Compensation. If a Review Panel hearing is scheduled at a time in the summer when any faculty member involved is not under contract, the faculty member will be compensated under terms mutually agreed upon at Meet-and-Discuss.

B. Continuing Rights. This appeal does not supplant any legal rights afforded by the Commonwealth of Pennsylvania and/or the Government of the United States. Nothing in this policy abrogates or modifies any provisions of or rights under the Collective Bargaining Agreement.

C. Intended Purpose. The grade appeal procedures are designed simply as a means to resolve differences between students and faculty related to grading. Under no circumstances should the results of a grade appeal be used for disciplinary action or personnel.

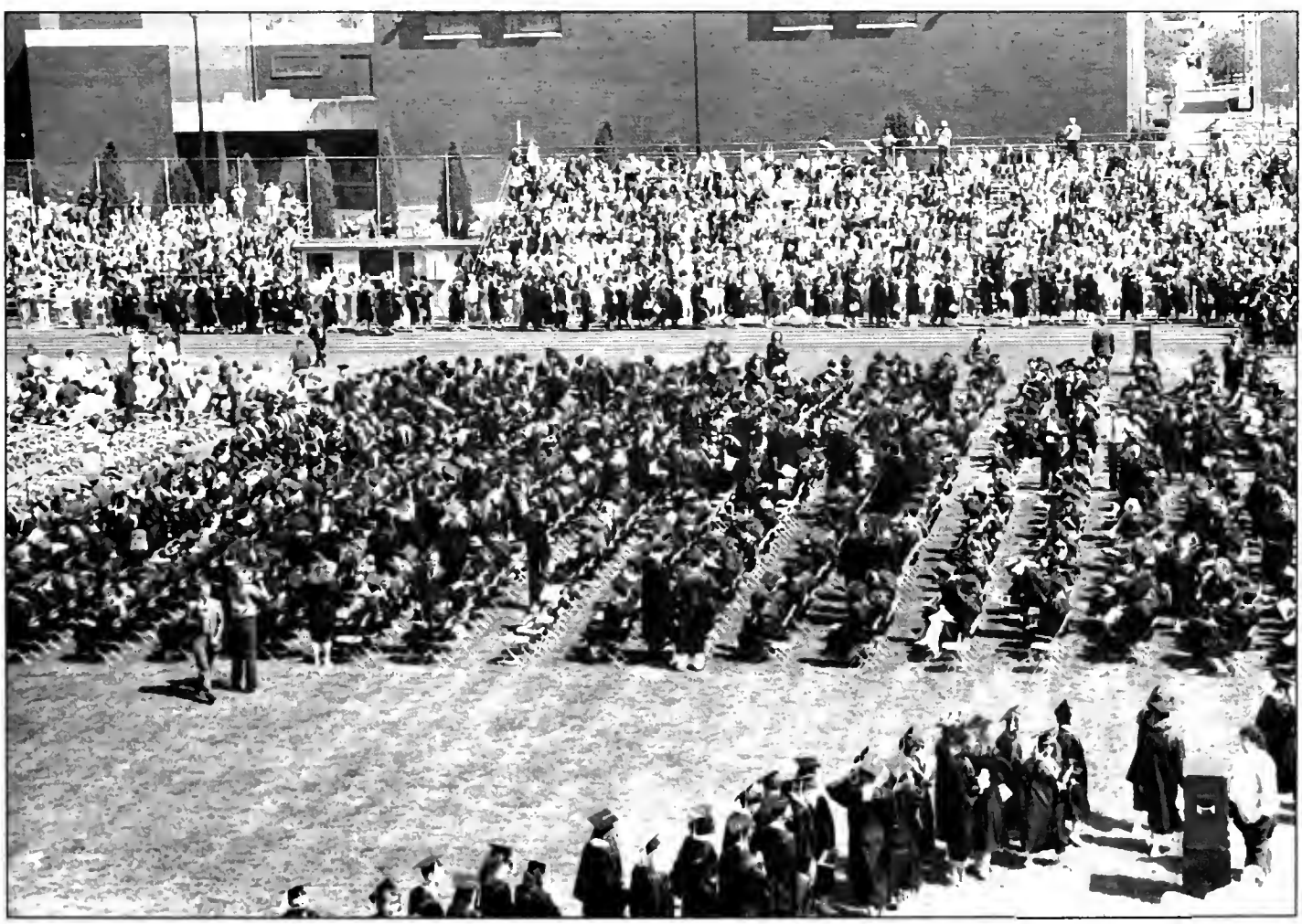
D. Amendment. Amendments may be implemented upon concurrence by University Senate, APSCUF Representative Council, and Meet-and-Discuss.

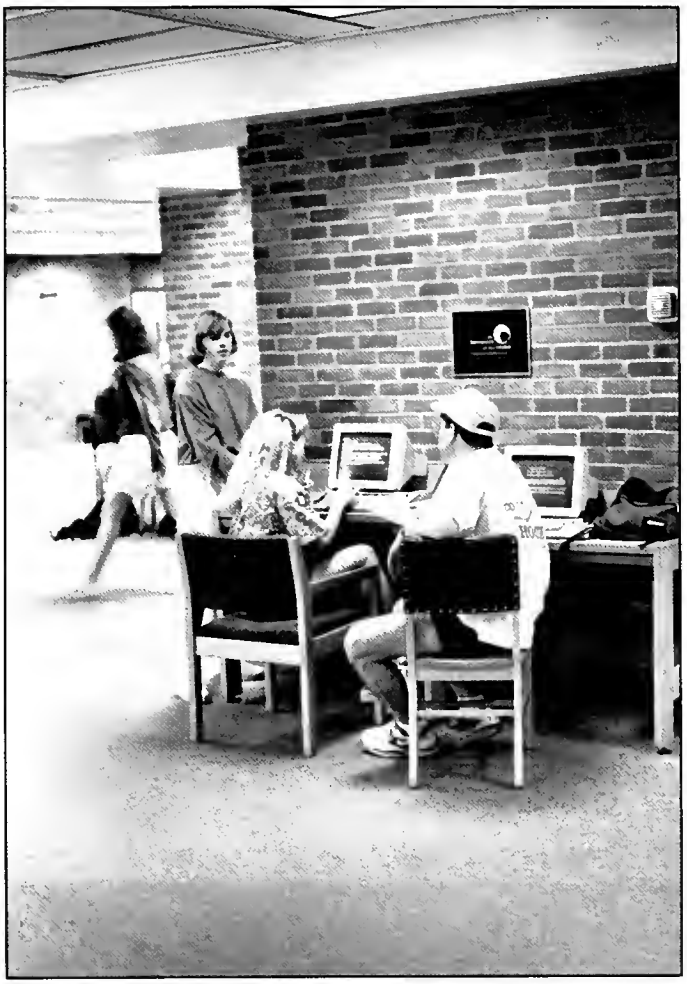
Note: In the amendment process above, specification of University Senate implies the Council of Trustees' role in approving Senate actions and recognizes the Council of Trustees' final action to change policy.

This policy replaces the policy originally effective at the beginning of the Spring Semester, 1986. Approved: University Senate, May 2, 1989; Council of Trustees, May 19, 1989.

Computer Software Policy

It is the policy of IUP that contractually protected and/or copyrighted computer software shall not be improperly copied, distributed, or used by its employees, students, or affiliated organizations. It is the responsibility of each member of the university community to adhere to this policy and to enforce it with regard to those they supervise. If any member of the community has a question regarding the propriety of using software, s/he is responsible for contacting his/her supervisor for direction. The supervisor may in turn refer the questions to the director of Academic Computing of the ISCC for a decision on what constitutes proper use. The full text of the policy adopted by University Senate and Council of Trustees in May, 1988, is available in the computer laboratories and from the director of Academic Computing.





Requirements for Graduation

Undergraduate students at IUP may pursue programs of study in any one of the six undergraduate colleges: the College of Business, the College of Education, the College of Fine Arts, the College of Health and Human Services, the College of Humanities and Social Sciences, or the College of Natural Sciences and Mathematics. A student may earn the degree of Bachelor of Arts, Bachelor of Science, Bachelor of Fine Arts, or the Bachelor of Science in Education. To do so, the student must satisfy all of the degree requirements, which fall into three categories: 1) university requirements; 2) college requirements; 3) department requirements. Requirements of the latter two categories may be found under the college and the department in which the student is pursuing a program of study.

University requirements for graduation in all curriculums consist of Liberal Studies requirements, residency requirements, and the semester hour and cumulative quality-point average requirements.

Exception: Students who enrolled in a degree program prior to June 1, 1989, are not subject to Liberal Studies requirements; they will complete degree requirements including the General Education components outlined in earlier editions of the Undergraduate Catalog. Transfer students entering the university between June 1, 1989, and June 1, 1991 were assigned either to General Education or Liberal Studies at the time their transcripts were evaluated. All transfer students admitted after June 1, 1991, are subject to the Liberal Studies requirements.

Academic Life during the Freshman Year

During the Summer Orientation (Phase II, as described in the section on Orientation), students meet with faculty advisers to plan a program of courses for their first year. This careful planning considers students' individual preferences, the results of placement testing, and degree program requirements.

With a typical freshman academic schedule, students progress both in the universitywide Liberal Studies program and in their intended majors.

Three Liberal Studies courses are designed especially for freshmen, and all students are expected to complete these courses during their first year. The three are EN101 College Writing, HI195: History: The Modern Era, and one course from a list of Fine Arts selections.

College Writing enhances skills in written expression that are essential to success at the university. History: The Modern Era builds critical thinking skills and provides a foundation of knowledge for subsequent courses. Whichever fine arts course is chosen encourages an appreciative participation in campus cultural life.

Professors teaching these courses work cooperatively with each other and with Student Affairs Division staff to integrate class work with campus lectures and arts events. Study skills development and tutoring services are also provided as necessary.

Semester Hour and Cumulative Quality-Point Average Requirement

Each student must complete a minimum of 124 semester hours to graduate, including 53 hours in Liberal Studies (all on a passing basis), and must have a 2.0 ("C" grade) cumulative quality-point average and a 2.0 ("C") average in his/her major and/or minor field.

Liberal Studies

All students must fulfill the requirements of the university's Liberal Studies program. This involves a minimum of 53 semester hours divided among Learning Skills, Knowledge Areas, and Synthesis. The number of semester hours may rise slightly depending on student choices. Different colleges and sometimes departments within colleges may have specific variations as to how these Liberal Studies requirements are to be met.

Liberal Studies provides the broad vision and understanding that enable individuals to enjoy full, rich lives and to play constructive roles in their communities. The goals for Liberal Studies include (1) the development of important modes of thinking and intellectual skills: critical thinking, literacy, understanding numerical data, historical consciousness, scientific inquiry, ethical perception, and aesthetic sensitivity; (2) the acquisition of a body of knowledge or understanding essential to an educated person; and (3) an understanding of the physical, as well as the intellectual, nature of human beings.

Liberal Studies Requirements

Note: Specific courses may be required or recommended by colleges or major departments, see degree program outlines for specifications.

Additional courses may be added to some categories during the next academic year; an updated listing is printed in each semester's schedule of undergraduate course offerings.

Learning Skills: English Composition — Two Courses — 7sh

EN101	College Writing	4
EN202	Research Writing (sophomore standing)	3

Learning Skills: Mathematics — One Course from List — 3-4sh

MA101	Foundations of Mathematics	3
MA102	Finite Mathematics	3
MA110	Elementary Functions	3
MA121	Calculus I for Natural and Social Sciences and Business	4
MA123	Calculus I for Physics and Chemistry	4
MA127	Calculus I	4
MA151	Elements of Math I (restricted to designated majors)	3
MA152	Elements of Math II (restricted to designated majors)	3
MA217	Probability and Statistics	3
BE111	Business Mathematics (restricted to designated majors)	3

Humanities — Three Courses* — 9sh

*One course in history, one in literature, and one in philosophy or religious studies.

History
HI195 History: The Modern Era 3

Literature:
EN121 Humanities: Literature 3
EL121 Humanities: Literature (taught in English) 3
EN210 Literary Analysis (English and Communication majors) 3

Philosophy or Religious Studies:
PH101 General Logic 3
PH120 Introduction to Philosophy 3
PH221 Introduction to Symbolic Logic 3
PH222 Ethics 3
PH223 Philosophy of Art 3
RS100 Introduction to Religion 3
RS250 Understanding the Bible 3
RS290 Christianity 3

Fine Arts — One Course from List — 3sh

AH101 Introduction to Art 3
MH101 Introduction to Music 3
TH101 Introduction to Theater 3

Natural Science — One Option — 8-10sh

Option I: Two-semester Laboratory Course Sequence 8sh
Two courses with laboratories (4sh each), paired together in a sequence, from the natural science laboratory course list

Natural Science Laboratory Sequences:
BI103 and 104 General Biology I and II 8
CH101 and 102 College Chemistry I and II 8
CH111 and 112 General Chemistry I and II 8
CH113 and 114 Concepts in Chemistry
Basic Inorganic Chemistry 8
GS101/102-103/104 Earth Science I and II with labs (either order) 8
GS121/122 or 123 Physical Geology with lab
and GS131/132 or 133 Historical Geology with lab 8
PY111/121 and 112/122 Physics I and II with labs 8
PY131/141 and 132/142 Physics I and II with labs (calculus) 8
SC105 and 106 Physical Science I and II (either order) 8

Option II: One Laboratory plus Two Nonlaboratory Courses 10sh
One course with laboratory (4sh) from the natural science laboratory course list followed by two courses (3sh each) from natural science nonlaboratory course list. One of the nonlaboratory courses may be counted again among the Liberal Studies Electives.

Natural Science Laboratory Courses
BI103 General Biology I 4
CH101 College Chemistry I 4
CH111 General Chemistry I 4
CH113 Concepts in Chemistry 4
GS101/102 Earth Science I with lab 4
GS103/104 Earth Science II with lab 4
GS121/122 or 123 Physical Geology with lab 4
PY111/121 Physics I 4
PY131/141 Physics I (calculus) 4
PY151/161 Medical Physics 4
SC105 Physical Science I 4
SC106 Physical Science II 4

Natural Science Nonlaboratory Courses:
BI114 Environmental Science 3
BI115 Biotic Diversity of North America 3
BI160 Biology of Aging 3
GS101 Earth Science I 3
GS103 Earth Science II 3
GS110 General Astronomy 3
GS121 Physical Geology 3
GS131 Historical Geology 3
GS141 Introduction to Ocean Science 3
GS150 Geology of the National Parks 3
GS151 Age of Dinosaurs 3
GS221 Physical Resources of the Earth 3
PY101 Energy and the Environment 3
PY111 Physics I 3
PY112 Physics II 3
PY131 Physics I (calculus) 3
PY132 Physics II (calculus) 3
PY151 Medical Physics 3

Social Sciences — Three Courses from List* — 9sh

No course prefix may be used more than once

AN110 Contemporary Anthropology (1) 3
AN211 Cultural Anthropology (1) 3
AN213 World Archaeology 3
CR101 Crime and Justice Systems 3
EC101 Basic Economics 3
EC121 Principles of Economics I 3
GE101 Intro to Geography: Human Environment Interaction 3
GE102 Geography of U.S. and Canada 3
GE103 Introduction to Human Geography 3
GE104 Geography of Non-Western World (1) 3
PS101 World Politics (1) 3
PS111 American Politics 3
PC101 General Psychology 3
SO151 Principles of Sociology 3
SO231 Contemporary Social Problems 3
(1) Also fulfills requirement for non-Western course

Health and Wellness — One Course — 3sh

HP143 Health and Wellness 3
FN143 Nutrition and Wellness 3

An alternate method of fulfilling this requirement is the completion of one year of Military Science/ROTC: MS101 American Military History (1650-1920) and Lab (2sh) and MS102 American Military History (1920-present) and Lab (2sh). The courses MS203 and 204 may be substituted for MS101 and 102. Veterans are given four credits toward these requirements by validating two years' active duty via form DD214.

Liberal Studies Electives — Three Courses from List* — 9sh

At least one course must be numbered 200 or higher
No course carrying the student's major prefix may be used
No course prefix may be used more than once, except for intermediate-level foreign language prefixes (FR, GM, SP, LA, and GK) which may be used twice.

See list of nonlaboratory natural sciences for additional courses which may be used as Liberal Studies electives.

See list of Non-Western Cultures courses, some of which (2) may be used as Liberal Studies Electives.

The following courses are also approved:
AH205 Ancient to Medieval Art 3
AH206 Renaissance to Baroque Art 3
AH211 Modern Art 3
AH222 Art in America 3
AN286 Marriage, Kinship, and the Family [same as SO286] (3) 3
BE101 Microbased Computer Literacy 3
(identical to CO101, IM101)
CM101 Communications Media in American Society 3
CO101 Microbased Computer Literacy 3
(identical to BE101, IM101)
CS101 Personal and Family Management 3
CS315 Consumer Economics and Family Finance 3
EC122 Principles of Economics II 3
FN145 Introduction to Nutrition 3
FR201 College French I (2) 3
FR202 College French II (2) 3
FR203 Accelerated College French 6
FR301 Portraits of Women in French Novels 3
GE230 Cultural Geography 3
GE231 Economic Geography 3
GE253 Geography of Europe 3
GM251 German III (2) 3
GM252 German IV (2) 3

HE218	Child Development	3
HE224	Marriage and Family Relations	3
HI210	Ancient Civilizations of Mediterranean and Near East	3
HI212	Ancient and Medieval Europe	3
HI214	Themes in American History	3
HI305	Renaissance and Reformation	3
HI363	Thought and Culture in Early America	3
HI364	Thought and Culture in Modern America	3
HI366	African-American Women	3
IM101	Microbased Computer Literacy (identical to BE101, CO101)	3
LA102	Elementary Latin II	4
LA201	Intermediate Latin (2)	4
MA121	Calculus I (1)	4
MA122	Calculus II	4
MA123	Calculus I (1)	4
MA124	Calculus II	4
MA152	Elements of Mathematics II (1) (specified majors only)	3
MA214	Probability and Statistics	3
MA216	Probability and Statistics	4
MA217	Probability and Statistics (1)	3
MA241	Differential Equations	3
MH301	Music History I	3
MH302	Music History II	3
PC310	Development Psychology	3
PC321	Abnormal Psychology	3
PC330	Social Psychology	3
PC378	Death and Dying	3
PH232	Philosophical Perspectives on Love and Marriage	3
PH321	Symbolic Logic II	3
PH323	Political Philosophy	3
PH324	History of Philosophy I	3
PH325	History of Philosophy II	3
PH326	Phenomenology and Existentialism	3
PH327	American Philosophy [inactive]	3
PH329	Philosophy of Religion	3
PH330	Philosophy of Science	3
PH400	Ethics and Public Policy	3
PH405	Justice and Human Rights	3
PH420	Metaphysics	3
PH421	Theory of Knowledge	3
PH450	Philosophy of Law	3
PH460	Philosophy of Language	3
PS346	Political Sociology	3
RS200	Religion and Culture	3
RS210	World Scriptures	3
RS260	American Religious Development	3
RS312	Archaeology and the Bible	3
RS410	History of Christian Thought I	3
RS440	History of Christian Thought II	3
SO286	Marriage, Kinship, and the Family [same as AN286]	3
SO332	Racial and Ethnic Minorities	3
SO337	World Societies and World Systems	3
SO340	Sociology of Industry	3
SO354	Sexual Inequality in Human Societies	3
SO445	Social Stratification	3
SO458	Political Sociology [same as PS346 Political Sociology]	3
SP102	Elementary Spanish II	4
SP201	Intermediate Spanish (2)	4
SP211	Intensive Intermediate Spanish [formerly SP201]	6

(1) Students may use this course to fulfill either the Learning Skills, Mathematics requirement or a Liberal Studies Elective requirement, but not both.

(2) Higher-level language courses may be substituted by students demonstrating such ability on placement tests.

Non-Western Cultures — One Course from List — 3sh*

*Students must fulfill this requirement by completing one course from the list; most of these courses will at the same time fulfill other requirements set by Liberal Studies or in some cases by a college or department.

Also fulfills LS Social Science requirement:

AN110	Contemporary Anthropology (1)	3
AN211	Cultural Anthropology	3
GE104	Geography of Non-Western World	3
PS101	World Politics	3

Also fulfills LS Elective requirement:

AN271	Cultural Area Studies: Africa [same as SO271]	3
AN272	Cultural Area Studies: China [same as SO272]	3
AN273	Cultural Area Studies: Southeast Asia [same as SO273]	3
AN274	Cultural Area Studies: Latin America [same as SO274]	3
AN350	Anthropology of Women	3
AN365	Native North American Religions [same as RS365]	3
CM230	Issues in International Communication	3
EC350	Comparative Economic Systems	3
GE252	Geography of Latin America	3
GE255	Geography of Africa	3
GE256	Geography of East Asia	3
GE257	Geography of South and Southeast Asia	3
HI330	History of the Islamic Civilization	3
HI331	Modern Middle East	3
IS281	Special Topics in Non-Western Studies	3
PS382	Political Systems: Africa	3
PS387	Political Systems: Latin America	3
PS389	Developing Nations	3
RS110	World Religions	3
RS311	Eastern Philosophy	3
RS360	African Religions	3
RS365	Native North American Religions [same as AN365]	3
RS370	Religions of China and Japan	3
RS375	Religions of India	3
RS380	Islam	3
SO271	Cultural Area Studies: Africa [same as AN271]	3
SO272	Cultural Area Studies: China [same as AN272]	3
SO273	Cultural Area Studies: Southeast Asia [same as AN273]	3
SO274	Cultural Area Studies: Latin America [same as AN274]	3
SP344	20th Century Spanish American Culture and Civilization [taught in Spanish]	3
SP364	Survey of Spanish American Literature [taught in Spanish]	3

Fulfills LS Non-Western requirement only:

CL151, 201, or 251	Arabic II, III, or IV	3
CL152, 202, or 252	Chinese II, III, or IV	3
CL155, 205, or 255	Hindi II, III, or IV	3
CL156, 206, or 256	Hungarian II, III, or IV	3
CL158, 208, or 258	Japanese II, III, or IV	3
CL159, 209, or 259	Korean II, III, or IV	3
CL162, 212, or 262	Russian II, III, or IV	3
EC 339	Economic Development I	3

Certain Study Abroad programs in non-Western culture areas information is in the respective catalog section; further information is available in the Office of International Services.

Synthesis — One Course — 3sh

LS 499 Senior Synthesis (required of all students) 3

Prerequisite: 73 or more semester hours earned.

This course helps students understand and handle complex intellectual and social issues from multiple perspectives. A selection of topics is available each semester and summer session. Students should schedule the course during the senior year, or at least no earlier than the last half of the junior year.

Writing Across the Curriculum — Minimum of Two "W" Courses

All students must include among the total courses required for graduation a minimum of two designated writing-intensive courses. One of these courses must be in the student's primary major; the other(s) may be in Liberal Studies, college or major requirements, or free electives. Such courses, which involve extensive use of writing as part of the learning experience, are identified with a /W/ in each semester's Schedule of Undergraduate Course Offerings.

Timely Completion of Degree Requirements

The minimum total semester hour requirement for a baccalaureate degree at

IUP is 124. Students who enroll in degree programs that require more than 124, or who seek the added benefit of a double major, minor, or specialized program, or who change majors should plan their sequence of courses carefully with an adviser. Such students should be alert to the possibility that they may need to carry a heavier than average class load in order to complete the degree in eight semesters. In some situations, summer work or an extra semester may be necessary. The need to enroll in remedial or other preparatory coursework or to repeat courses may also affect progress toward a degree.

Residency Requirement

All students receiving an initial IUP baccalaureate degree are required to complete forty-five semester hours in IUP courses. At least fifteen semester hours in IUP courses are required to fulfill an IUP major and a minimum of six semester hours for a minor. Normally, the student will complete the final thirty semester hours in residence in IUP courses, unless specific approval has been secured from the dean of the student's college. Exception to the above requirements for courses to be earned in residence at IUP may be granted by the college deans based upon the appropriateness and academic integrity of the courses in question. This approval is generally sought as part of the process for prior approval of off-campus coursework.

Pre-Approval for Transfer Coursework

Students enrolled at IUP who wish to take coursework at another institution (either during the summer or regular semesters) must complete an Application for Coursework Outside IUP prior to taking the course(s). Only the credits from the course(s) transfer, not the grade; therefore, students cannot use outside coursework for IUP's repeat policy. Only the credits for which students receive the grade of A, B, or C will transfer. If P/F is the only grading option available, there must be a narrative evaluation from the faculty member certifying that the work was of C level or better. No more than sixty credits total may be earned at a junior or community college for application toward an IUP degree. If the courses are being taken within the student's last thirty credits, the courses must be taken at IUP unless the student's residency requirement is waived by the college dean. Courses without prior approval are taken at the risk of the student; there is no obligation on the part of any officer of this university to accept or transfer such credit.

Forms for approval of off-campus coursework are available in the Office of Transfer Credit Evaluation/Academic Information Systems. Full directions on the form outline the steps involving the transfer evaluation, student's adviser, and college dean, or designee. After completing off-campus coursework, students should have the institution at which the work was taken send a final official transcript directly to Transfer Evaluation Services, 347 Sutton Hall, IUP, Indiana, PA 15705. Copies of transcripts issued to or hand carried by students will not be accepted.

Eligibility and Application for Graduation

Commencement ceremonies are held annually at IUP at the conclusion of the spring semester during the month of May. Only students who have completed all requirements for graduation by the end of the spring semester are eligible to participate in the commencement exercises. Students who have withdrawn from courses or have elected to take incompletes or have failed courses during the spring semester and thus have not met the requirements for graduation may not participate in commencement exercises until those requirements have been fulfilled. Students completing requirements in August or December are included on the graduation list the following May and may participate in commencement at that time.

Students are responsible for knowing and fulfilling the requirements for graduation in their degree program. It is the student's responsibility to complete a form to apply for graduation and submit it to the office of the dean of his/her college early in the term prior to graduation.

Certification for graduation is not final until approved by the dean of the college in which the student is enrolled. Diplomas will not be issued until all bills and obligations have been satisfied, including the degree fee, and final certification for graduation has been issued by the student's college dean.

Non-Native Students: English Language Requirements

Non-native students of English, either international students or those from the U.S. for whom English is not their first learned language, are required to take an ESL Screening/Placement Test prior to registration in the first semester attending IUP. The test is administered prior to registration in both the fall and spring semesters. Results of this test are used to determine for which English course (EN100/ESL, EN101/ESL, EN202/ESL, EN121/ESL) a newly admitted non-native student must register. In addition, any currently enrolled non-native student can take the regularly scheduled test to determine registration for non-ESL English courses. For further information, contact Dr Dan Tannacito, 212 Eicher Hall; telephone (412)357-7081.

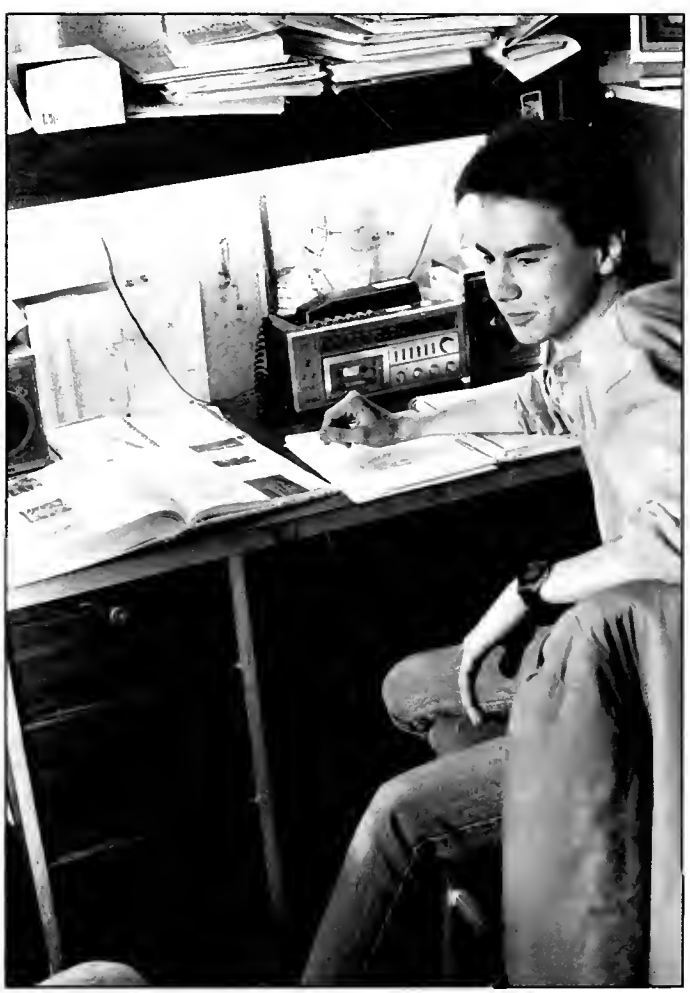
Undergraduate Catalog Applicability Time Frame

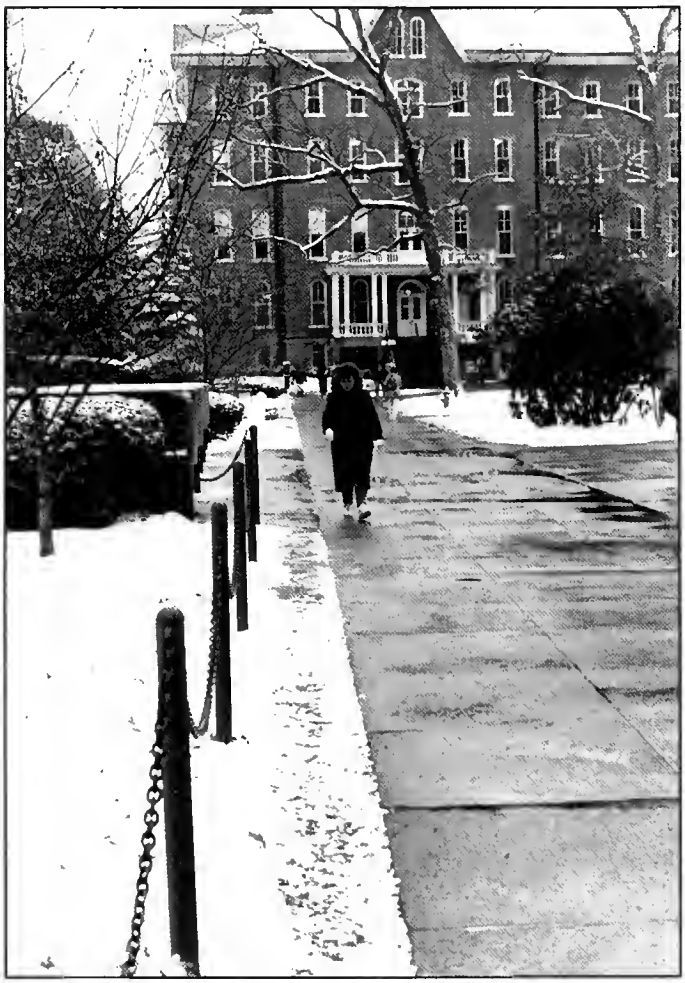
The university reserves the right to modify degree requirements through established governance channels. However, the general policy has been established that the following time frame regulations form the basis for application of the university's undergraduate degree requirements:

1. A student who has been in continuous registration (fall and spring semesters) or who has interruption(s) of less than two calendar years is governed by the requirements outlined in the catalog in effect at the time of entrance into a degree program (major).
   a. A student who changes major will be governed by the requirements of the major and/or college at the time of acceptance into the new major, without change of Liberal Studies requirements except as specified by the new major.
   b. A student entering through the nondegree program is governed by the requirements in effect at the time degree candidacy is awarded.
   c. A part-time student may be covered by these provisions of continuous registration to a maximum of ten years.

2. A student whose education is interrupted by two or more calendar years will be governed by the requirements in effect at the time of readmission to the university. The readmission may carry specific requirements/substitutions necessary to provide for program integrity.

3. The applicability of coursework completed more than ten years prior to the degree date is subject to review by the dean or designee for evaluation on a course-by-course basis.





Academic Affairs Division Areas

Mark J. Staszkiewicz, Interim Provost
Sharon Brown-McGowan, Acting Associate Provost
Alphonse Novels, Assistant Provost

The Academic Affairs areas below provide instruction in several disciplines that are not specific to one of the university's distinct colleges. They offer services and instruction under the direction of the Provost's Office.

The University Libraries

Larry A. Kroah, Director; Walter R. Laude, Chairperson; Brown, Connell, Grassinger, Hall, Hooks, Janicki, Jen, Joseph, Kaufman, Kirby, Knupp, Lucas, McDevitt, Rahkonen, Shively, Steiner, Zorich; and professors emeriti LaFranchi, Waddell

The Libraries and Media Resources Department serves the informational and research needs of students and faculty by providing a wide variety of academic resources which include books, periodicals, micro materials, media, and computer data base. The Library is committed to providing greater access to an ever-increasing volume of information using such advancements as interactive video, satellite teleconferencing, microcomputer-based technologies, and a state-of-the-art online public access catalog, in addition to more traditional means.

The Library faculty offers individual and group assistance in using the Library's resources. Library services include access to both local and national data bases, media equipment and production support, and classes in bibliographic instruction.

The Library faculty offers a one-credit course in the use of libraries, LB151: Introduction to Library Resources.

Military Science

Lte Ricky J. Steele, Chairperson; Maj Scott M. Ferderber, Cpt C. Geoff Herrmann, Cpt Colleen J. Herrmann, Cpt Edgardo A. Vega, Sgm Garland Hill, Msg Michael L. Camechis, Msg George H. Zaun, Ssg Randy M. Johnson, Mrs. Donna S. Rankin

IUP is an authorized Senior Reserve Officer's Training Corps (ROTC) unit. The ROTC program offers to both men and women the opportunity to learn and practice leadership and managerial techniques that will prove beneficial to all life's future endeavors, to obtain credits which count toward graduation; and, to those who choose to complete the total program, to obtain a commission as a second lieutenant in the U.S. Army.

Regular ROTC classes for two semesters satisfy the mandatory Liberal Studies requirement for Health and Wellness classes.

Enrollment

The program is divided into two phases: the Basic Course (freshman and sophomore years) and the Advanced Course (junior and senior years).

Regular Basic Course

The first two years of military science provide a background of the historical role of military forces as well as current national military objectives. In addition, basic leadership is developed and certain skills are taught, such as adventure training, survival training, map reading, self defense, rappelling, and marksmanship. Enrollment in any of the freshman- or sophomore-level ROTC courses (MS101, 102, 203, or 204) in no way obligates or commits the student to any military service or any further ROTC courses. These courses are offered on the same basis as other academic courses at IUP with the privilege of withdrawing at any time.

Advanced Course

The last two years constitute the Advanced Course of instruction for men and women who desire a commission as a second lieutenant in the Army of the United States (either the Army Reserve, National Guard, or, for selected students, the Regular Army). This phase is composed of studies in advanced leadership and management, tactics, military law, and psychological, physiological, and social factors which affect human behavior. Modern instructional and training techniques are also covered. Practical application is the rule, and students have the opportunity to practice and polish their skills. Participation in the Advanced Course will earn the student approximately $2,500, between $100-a-month subsistence and pay for summer camp ($1,800 is not taxable). For continuation in ROTC during the junior and senior years, the student must have a 2.0 grade-point average in the student's academic area, have successfully completed requirements for the ROTC Basic Course, pass a physical examination, and be accepted by the Professor of Military Science (PMS). The U.S. Army requirements for commissioning include a course in written communications and in human behavior. IUP students normally fulfill these requirements with EN101 and EN202 and with a course in psychology, anthropology, sociology, or certain major courses in human behavior. Advanced course students must agree in writing to complete the junior and senior years, since they will receive $100-a-month subsistence during these academic years.

Requirements for Enrollment

The general requirements for enrollment in Advanced ROTC are that the student be accepted by the university as a regular enrolled student, be a citizen of the United States, be physically qualified, and be not less than seventeen years of age but less than thirty at anticipated graduation date. Veterans and Junior ROTC graduates may receive exemption from the ROTC Basic Course as approved by the Professor of Military Science.

What ROTC Offers

Equipment, ROTC textbooks, and uniforms are issued without cost to enrolled students.

Credit is given for successful completion of the three-semester-hour Health and Wellness Liberal Studies requirement for graduation.

Students formally enrolled in the Advanced Course (MS305, 306, 407, and 408) are paid a subsistence allowance ($100 a month) during the academic year.

Training is given in other practical skills such as self-defense, adventure training, rappelling, marksmanship, orienteering, first aid techniques, and water safety.

Opportunities are available to examine the military profession in detail. This includes the Regular Army, National Guard, and Army Reserve.

If students so desire and are accepted into the Advanced Course, they will receive commissions as second lieutenants upon graduation from the university and serve either three years' continuous active duty or two to three months' active duty for training, with the remaining obligation served in the Army Reserve or National Guard.

Program in Military Science

Required courses		20
MS101	American Military History (1650-1920)	2sh(1)
MS102	American Military History (1920-Present)	2sh(1)
MS203	Fundamentals of Tactical Operations, Techniques of Leadership, and Weapons Characteristics	2sh(2)
MS204	National Security and Fundamentals of Military Topography	2sh(2)
MS305	Fundamentals of Leadership and Modern Learning/Teaching Relationship	3sh
MS306	Study of Advanced Leader Planning and Execution of Modern Combat Operations	3sh
MS407	Management of the Military Complex to Include Fundamentals of Military and International Law	3sh
MS408	Seminar in Military Analysis and Management	3sh

(1) MS101-102 may substitute for the Liberal Studies requirement in Health and Wellness.
(2) MS203-204 are available as free electives to all students without any military obligation.

Women's Studies Program

Maureen C. McHugh, Director

The Women's Studies minor is designed to examine the status and experiences of women from a multidisciplinary perspective. The courses use a variety of methods and disciplinary perspectives to explore the impact of gender on the experiences of the individual. Women's contributions to a variety of fields and the historical, literary, and cultural images of women are also addressed. Students are encouraged to challenge traditional theories and research regarding women, and to develop a critical, multidisciplinary, multicultural, and gendered view of the world. Courses taught within the minor typically involve the students through innovative, experiential classroom exercises and written assignments. Courses in Women's Studies address social equity issues and encourage students to perceive themselves as capable of transforming society.

A minor in women's studies indicates to the prospective employer an awareness of and sensitivity to gender issues. This awareness may be needed in the following positions: personnel specialist, affirmative action officer, crisis intervention specialist, family and youth services provider, legal advocate. A minor in women's studies can contribute to success in a variety of fields including communication, counseling, criminology, education, health, journalism, law, politics, psychology, and applied sociology.

Minor — Women's Studies

Required course.		3
WS200	Introduction to Women's Studies	3sh
Controlled electives, one course from at least three of the following four course groupings		12
Group A: Philosophy and History		
HI369	Women in America	3sh
HI390	Women in World Culture	3sh
PH232	Philosophical Perspectives on Love, Marriage, and Divorce	3sh
HI366	African-American Women	3sh
RS481	Women and Religion	3sh
Group B: Arts and Literature		
EN384	Introduction to Literature by Women	3sh
EN336	Language, Gender, and Society	3sh
FR301	Portraits of Women in the French Novel	3sh
Group C: Social Sciences		
AN350	Anthropology of Women	3sh
PC411	Psychology of Women	3sh
SO427	Spouse Abuse	3sh
SO354	Sexual Inequality	3sh
CR390	Women and Crime	3sh
Group D: Health and Science		
HP430	The American Woman and Sport	3sh
PC379	Psychology of Human Sexuality	3sh
HP481	Gender, Lifestyles, and Health	3sh

The Learning Center

Carmy Carranza, Director; Sally Lipsky, Chairperson; S. Dean, Green, Stratton, Victor, Wilkie, Winstead

The Learning Center, a unit of the Student Affairs Division, provides various academic support services. Courses are offered which develop learning skills to enhance academic success. Courses in two levels of remedial mathematics and a course in reading are offered for institutional credit; institutional credit counts in determining full-time enrollment status but not in determining credits applicable for degree eligibility at graduation.

Learning Center faculty members also offer three one-credit courses in conjunction with the College of Education in Educational Planning (ED150), Learning Strategies (ED160), and Career Exploration (ED170).

Free tutoring and workshops are provided by a trained staff of undergraduate paraprofessionals. These services are available in most content areas, as well as in general study skills.

In addition, the Learning Center provides administration of the university's Act 101 Program. For information about additional services see Learning Center/Act 101 in the catalog section "Student Programs and Services."

Office of International Services

Laila S. Dahan, Director
Patrick A. Carone, Foreign Student Adviser

Study Abroad, International Student Exchange, and Study Tours

The Office of International Services offers many important opportunities beyond the required curriculum. For example, there are programs enabling the student to travel and study abroad. The university regularly sponsors summer study tours as well as programs of study, ranging in length from three weeks to a full semester, in England, France, Germany, Spain, Hungary, Egypt, Mexico, Sweden, Japan, Finland, and Thailand. A variety of programs enable the student to spend a year abroad. The Office, in cooperation with Georgetown University in Washington, D.C., administers IUP's participation in the International Student Exchange Program (ISEP). This program enables IUP students to choose from more than 300 universities around the world so that the specialized interests of any student can be accommodated quite readily. Students may also exchange with one of the seventy U.S. universities

participating in the National Student Exchange coordinated by the Center for International Studies.

The Liberal Studies non-Western cultures requirement may be fulfilled by certain credit-bearing study abroad. Established IUP-sponsored group study opportunities in several countries are approved to satisfy the requirement. Students may also arrange in advance to receive Liberal Studies non-Western credit for ISEP-sponsored or individually designed study abroad.

For information and application procedures, contact Ms. Laila S. Dahan, director of the Office of International Services.

The Harrisburg Internship Semester (T.H.I.S.)

Experiential Education Office

The Harrisburg Internship Semester (T.H.I.S.) is available to an exceptional student from any IUP major for the fall or spring semester. The program provides a semester-long experience at the policymaking level in the executive or legislative branches of state government as well as independent boards, agencies, or commissions. Students will earn fifteen credits.

Requirements for eligibility are fifty-seven or more earned credits and an overall QPA of at least 3.0. Applicants must also submit a sample of their writing skills which must be a copy of an IUP writing assignment that has been graded by an instructor.

T.H.I.S. consists of an internship with a research project for twelve credits and an academic seminar for three credits. The program is directed by a SSHE faculty member elected to direct the program in Harrisburg. The faculty member will be the site supervisor and teach the seminar course. Grades and credits will be recorded on the students' academic progress reports at IUP. See the course descriptions under UN480 and UN493.

Housing is arranged at the PolyClinic Hospital in its nursing residence hall. Meals are available in the hospital dining room or elsewhere. Students must pay IUP tuition, room, and board in the first place and then be partially reimbursed via a biweekly paycheck during the semester. Students must pay their own transportation costs between their home and Harrisburg.

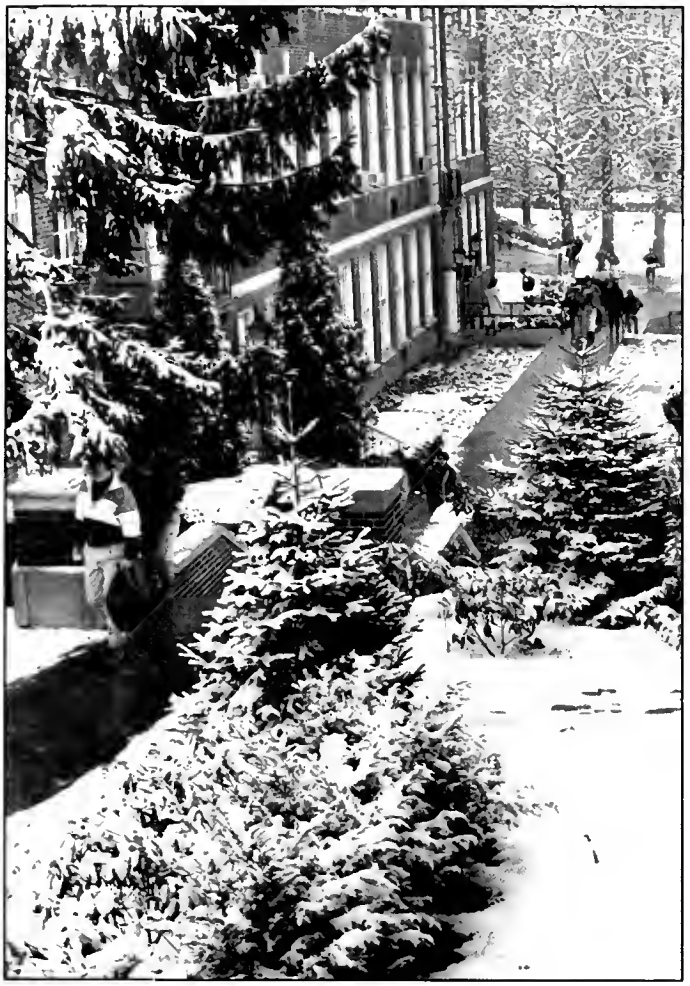
T.H.I.S. is offered through the Experiential Education Office in conjunction with the academic department of the successful candidate. Applications are submitted to the Experiential Education Office, Stouffer Hall. Deadline for submission for fall is March 1, the spring semester deadline is October 1.

The IUP Academy of Culinary Arts at Punxsutawney

Albert Wutsch, Director; Hilary DeMane, Timothy Brown, Daniel Kish, and Martha Geer, Chef Instructors

The Academy of Culinary Arts at Punxsutawney offers a unique educational experience by combining competency/performance-based instruction with a semester of practical application during an externship. This distinctive association between a hands-on discipline, fundamental culinary theory, and on-the-job work experience, provides each student with the necessary skills and knowledge to begin a successful career in the field of culinary arts.

A sequential, modular-based curriculum allows students to fulfill the requirements for the various instructional levels. This program leads to a certificate in Culinary Arts. This contemporary approach to learning will enable students to achieve elevated levels of proficiency in both culinary techniques and business management skills while they advance through this occupational training program.



The College of Business

Robert C. Camp, Dean
To be appointed, Associate Dean

Departments within the College of Business include Accounting, Finance and Legal Studies, Management, Management Information Systems and Decision Sciences, Marketing, and Office Systems and Business Education.

The Bachelor of Science degree is offered in Accounting, Finance, Management Information Systems, Management, Marketing, Office Administration, and Human Resource Management. The Office Systems and Business Education Department offers the Bachelor of Science in Education degree with a Business Education major and Bachelor of Science in Education degree with a Marketing and Distributive Education major. There is also a two-year Associate of Arts degree in Business with a concentration in Computers and Office Information Systems offered at the Armstrong and Punxsutawney campuses.

Bachelor of Science Degree

For those pursuing the Bachelor of Science degree, IUP's training will provide a broad liberal background in the behavioral sciences; a keen perception of the socioeconomic world in which we live and work; a foundation of general professional education for personally fruitful and socially useful careers in the varied fields of business; and opportunity to obtain the specialized knowledge and skills essential to future occupational growth and advancement. There are seven Bachelor of Science degrees offered in business—Accounting, Finance, Human Resource Management, Management, Management Information Systems, Marketing, and Office Administration. Each area provides for a variety of business and business-related courses which are designed to enrich the student's understanding of the modern business system.

Entering IUP students not initially admitted to the College of Business must apply individually for change of major, which will be granted only to those who have completed at least twenty-four credits at IUP and have achieved no less than a 2.4 grade-point average at IUP.

Enrollment in all College of Business courses at the 300 and 400 level is restricted to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

A student may not pursue coursework in the College of Business with the expectation of graduating from the College of Business unless he/she has been accepted as a degree candidate in the College of Business.

College of Business students may, in consultation with their advisers, plan their program of study to obtain a minor in an area of business specialization other than their major or a related area outside of the College of Business.

Bachelor of Science in Education Degree

IUP's College of Business seeks to serve the needs of its students and the needs of business, industry, and education through its diverse programs. Known for fifty years for excellence in Business Education, IUP's program in Distributive Education prepares teacher-coordinators for secondary schools offering programs in marketing, distribution, and cooperative work experience. These two degree areas (Bachelor of Science in Education with a Business Education major and the Bachelor of Science in Education with a Marketing Education major) are designed to prepare teachers for comprehensive high schools, area vocational-technical schools, and community colleges.

Associate of Arts Degree

Students who desire a two-year program that prepares them to enter the business world may elect to pursue the Associate of Arts degree program specializing in Computer and Office Information Systems. The Associate of Arts degree is available only on the Armstrong County and Punxsutawney campuses. Admission to the Associate Degree program in accounting has been suspended. See Department of Office Systems and Business Education for further information.

Department of Accounting

Duane Ponko, Chairperson; Anderson, Bradwick, Burner, W. Davis, Eiteman, Ghobashy, Hyder, Joseph, Kline, Lindh, Manley, Plivelic, Ponko, Pressly, Robbins, Woan, Yerep; and professors emeriti Cooper, Tiger

The Accounting Department provides the training necessary for one to enter the fields of public accounting, accounting in business or industry, and governmental accounting.

Bachelor of Science—Accounting

Liberal Studies: As outlined in Liberal Studies section 54-56
with the following specifications:
- Mathematics: MA121
- Social Science: EC121, PC101
- Liberal Studies elective: MA214, EC122, BE/CO/IM 101, no courses with AG prefix

College: Business Administration Core 33
Required courses:

AD321	Business and Interpersonal Communications	3sh
AG201	Principles of Accounting I	3sh
AG202	Principles of Accounting II	3sh
BL235	Introduction to Business Law	3sh
FI310	Finance I	3sh
IM300	Information Systems: Theory and Practice	3sh
MG310	Principles of Management	3sh
MG330	Production and Management Operations	3sh
MG495	Business Policy	3sh
MK320	Principles of Marketing	3sh
QB215	Business Statistics	3sh

Major: Accounting (1) 27
Required courses:
AG301 Intermediate Accounting I 3sh
AG302 Intermediate Accounting II 3sh
AG311 Cost Accounting 3sh
AG401 Advanced Accounting 3sh
AG412 Advanced Cost Accounting 3sh
AG421 Federal Taxes 3sh
AG431 Auditing 3sh
Controlled electives
Two courses from this list 6sh
AG422, AG435, AG441, AG451, AG 461, AG 471, BL336

Other Requirements: 0

Free Electives: 8-10

Total Degree Requirements: 124

(1) A 2.50 average is required in all 300 and 400 level accounting (AG) courses in order to graduate with a major in accounting.

Department of Finance and Legal Studies

Terry T. Ray, Chairperson; Affaneh, Ames, Boldin, Duhala, McCaffrey, Roberts, Strock, Troxell, Walia, Welker

Finance Major

The finance major, leading to the degree of Bachelor of Science, is designed to educate those students who are interested in the financial management of the firm.

The objective of the finance area is to prepare students to deal with financial problem solving in the areas of financial management and investment analysis. Graduates should be knowledgeable of the basic theory of Finance so as to apply it to the rapidly changing field

Legal Studies

Legal studies offers a variety of law and law-related courses with a special emphasis on business applications. Legal studies provides the student with a solid, legally oriented background necessary to a career in business or as preparation for pursuit of a law or law-related career

Bachelor of Science—Finance

Liberal Studies: As outlined in Liberal Studies section 54-56
with the following specifications:
Mathematics: MA121
Social Science: EC121, PC101
Liberal Studies elective: MA214, EC122, BE/CO/IM101, no courses with FI prefix

College: Business Administration Core 33
Required courses:
AD321 Business and Interpersonal Communications 3sh
AG201 Principles of Accounting I 3sh
AG202 Principles of Accounting II 3sh
BL235 Introduction to Business Law 3sh
FI310 Finance I 3sh
IM300 Information Systems: Theory and Practice 3sh
MG310 Principles of Management 3sh
MG330 Production and Management Operations 3sh
MG495 Business Policy 3sh
MK320 Principles of Marketing 3sh
QB215 Business Statistics 3sh

Major: Finance 27
Required courses:
EC325 Monetary Economics I 3sh
FI320 Finance II 3sh
FI322 Life Insurance 3sh
FI324 Principles of Investments 3sh
FI420 Investment Analysis 3sh
FI422 Seminar in Finance 3sh
Controlled electives, three courses from the following. 9sh
AG421, EC326, EC334, EC345, EC356, FI312, FI385, FI410, IM251, QB380

Other Requirements: 0

Free Electives: 8-10

Total Degree Requirements: 124

Pre-Law Minor in College of Business

The pre-law minor is intended for the student who is a business major concentrating in one of the business areas and interested in law as a career. The minor consists of twenty-one semester hours selected by the students from a predetermined list of courses spread over five areas of Humanities and Social Sciences. The goals of the pre-law minor are academic accomplishment, guidance, and advisement. Interested business students should contact the pre-law adviser in the Finance and Legal Studies Department.

Bachelor of Science—Business/Pre-Law (1)

Liberal Studies: As outlined in Liberal Studies section 54-56
with the following specifications:
Mathematics: MA121
Social Science: EC121, PC101
Liberal Studies electives: MA214, EC122, BE/CO/IM101, no courses with major prefix

College: Business Administration Core 33
Required courses:
AD321 Business and Interpersonal Communications 3sh
AG201 Accounting Principles I 3sh
AG202 Accounting Principles II 3sh
BL235 Introduction to Business Law 3sh
FI310 Finance 3sh
IM300 Information Systems: Theory and Practice 3sh
MG310 Principles of Management 3sh
MG330 Production and Management Operations 3sh
MG495 Business Policy 3sh
MK320 Principles of Marketing 3sh
QB215 Business Statistics 3sh

Major: One Major in Business Administration Areas(1) 27
Accounting Major
Finance Major
Human Resources Management Major
Management Major/Industrial Management Track
Management Major/General Management Track
Management Major/Entrepreneurship and Small Business Track
Management Information Systems Major
Marketing Major
Office Systems Major

Pre-Law Interdisciplinary Minor for Business 9-21
Seven courses, with at least one course from six areas
Criminology: CR210, CR260, CR357
Economics: EC121, EC122, EC332
English: EN213, EN220, EN310
History: HI320, HI321, HI346
Philosophy: PH101, PH222, PH450
Political Science: PS358, PS359, PS361

Free Electives: 0-1

(#) Total Degree Requirements: 124-125

(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

(1) This program is the generic outline for the pre-law minor with any of the listed College of Business majors

Department of Management

Manmohan D. Chaubey, Chairperson; Ali, Anderson, Ashamalla, Falcone, Gibbs, Orife, Osborne, G. Ryan, J. Ryan, Soni; and professors emeriti McGovern, Stevenson

Graduates holding the Bachelor of Science degree in Management or Human Resource Management may find employment opportunities in both the public and private sectors. In the 1990s opportunities are expected to be especially plentiful in the services sector (e.g., retailing, health care, food services, finance, and transportation).

The Bachelor of Science in Management program offers three concentrations: Industrial Management, General Management, and Entrepreneurship and Small Business Management. Students in the Industrial Management concentration are well grounded in both management theory and application, but their focus is more upon production/operations/industrial management. The concentration in General Management is distinguished by its low level of structure or specificity. The greater flexibility of this major can be useful to the student who wishes to design a customized management specialization (e.g., fine arts management). Students taking the Entrepreneurship and Small Business Management concentration will focus on creation and operation of a small business. This concentration might also be desirable for graduates who will be working in small businesses where the manager often must wear several hats.

The Bachelor of Science in Human Resource Management prepares individuals in both the theoretical and applied aspects of managing the human resources function in organizations as a generalist or specialist.

Bachelor of Science—Management

Liberal Studies: As outlined in Liberal Studies section 54-56
with the following specifications:
- Mathematics: MA121
- Social Science: EC121, PC101
- Liberal Studies elective: MA214, EC122, BE/CO/IM101, no courses with MG prefix

College: Business Administration Core 33
Required courses:

AD321	Business and Interpersonal Communications	3sh
AG201	Principles of Accounting I	3sh
AG202	Principles of Accounting II	3sh
BL235	Introduction to Business Law	3sh
FI310	Finance I	3sh
IM300	Information Systems: Theory and Practice	3sh
MG310	Principles of Management	3sh
MG330	Production and Management Operations	3sh
MG495	Business Policy	3sh
MK320	Principles of Marketing	3sh
QB215	Business Statistics	3sh

Major: One Concentration 27

Industrial Management Concentration
Required courses:

AG300	Managerial Accounting	3sh(1)
MG300	Human Resources Management	3sh
MG428	Seminar in Management	3sh

Controlled electives:

One course from list: CO110 or FS351		3sh
Two courses from two areas on list: MG402 or LR480, MG401 or MG400, AG311		6sh
Three courses from list or additional electives from above: BL336, EC371, EC372, EN310 or JN326, FI320, MA317, MG410, MG481, MG490, MG493(3sh max), MK420, QB380, SA101		9sh

General Management Concentration
Required courses:

AG300	Managerial Accounting	3sh(1)
MG300	Human Resource Management	3sh
MG428	Seminar in Management	3sh

Controlled electives:

Two Advanced Business electives: 300/400 level courses	6sh(2)
Two Advanced Economics electives: 300/400 level courses	6sh
Two other advanced electives, 300/400 level courses	6sh

Entrepreneurship and Small Business Management Concentration
Required courses:

AG300	Managerial Accounting	3sh
MG275	Introduction to Entrepreneurship	3sh
MG325	Small Business Management	3sh
MG403	Small Business Planning	3sh
MG492	Internship	6sh
Major Area Restricted Electives		9sh

Other Requirements: 0

Free Electives: 8-10

Total Degree Requirements: 124

(1) AG301, Intermediate Accounting I may be substituted to use as prerequisite for AG311: Cost Accounting.
(2) Only one MG and/or one AG course may be included in this category.
(3) Note prerequisites for controlled electives in planning sequence.

Bachelor of Science—Human Resources Management

Liberal Studies: As outlined in Liberal Studies section 54-56
with the following specifications:
- Mathematics: MA121
- Social Science: EC121, PC101
- Liberal Studies elective: MA214, EC122, BE/CO/IM101, no courses with MG prefix

College: Business Administration Core 33
Required courses:

AD321	Business and Interpersonal Communications	3sh
AG201	Principles of Accounting I	3sh
AG202	Principles of Accounting II	3sh
BL235	Introduction to Business Law	3sh
FI310	Finance I	3sh
IM300	Information Systems: Theory and Practice	3sh
MG310	Principles of Management	3sh
MG330	Production and Management Operations	3sh
MG495	Business Policy	3sh
MK320	Principles of Marketing	3sh
QB215	Business Statistics	3sh

Major: Human Resource Management 30
Required courses:

AG300	Managerial Accounting	3sh(1)
MG300	Human Resources Management	3sh
MG428	Seminar in Management	3sh
MG400	Wage and Salary Administration	3sh

Controlled electives:

One course from list: EC330 or PC420	3sh
One course from list: MG401 or MG402	3sh
Three courses from list: EC371, EC372, EC373, EN310, EN312, JN326, LR426, LR480, MG311, MG410, MG493(3sh max), EC330 or PC371, PC420 (if not above), SO340	9sh(2)

Other Requirements: 0

Free Electives: 8-10

Total Degree Requirements: 124

(1) AG301: Intermediate Accounting I may be substituted to use as prerequisite for AG311: Cost Accounting.
(2) Note prerequisites for controlled electives in planning sequence.

Department of Management Information Systems and Decision Sciences

Kenneth L. Shildt, Chairperson; Albohali, Burky, Chen, Halapin, McFerron, Nahouraii, Solak; and professor emeritus Spencer

The Management Information Systems major prepares students for careers in the business computer and information systems profession. Computer programming languages, software engineering, systems analysis, design concepts, computer architecture, data base management systems, microcomputer applications, and computer networks are integrated with other business disciplines to prepare students to develop and maintain business information systems. The major also incorporates an emphasis on managerial and end-user concerns related to modern information systems.

Decision Sciences provides students with the knowledge of statistical and other quantitative techniques that will help decision making in business. The techniques include mathematical programming, forecasting, inventory control, simulation, queuing theory, stochastic process, and network models.

Bachelor of Science—Management Information Systems

Liberal Studies: As outlined in Liberal Studies section 54-56
with the following specifications:
- Mathematics: MA121
- Social Science: EC121, PC101
- Liberal Studies electives: MA214, EC122, BE/CO101, no courses with IM prefix

College: Business Administration Core 33
Required courses:

AD321	Business and Interpersonal Communications	3sh
AG201	Principles of Accounting I	3sh
AG202	Principles of Accounting II	3sh
BL235	Introduction to Business Law	3sh
FI310	Finance I	3sh
IM300	Information Systems: Theory and Practice	3sh
MG310	Principles of Management	3sh
MG330	Production and Management Operations	3sh
MG495	Business Policy	3sh
MK320	Principles of Marketing	3sh
QB215	Business Statistics	3sh

Major: Management Information Systems 27
Required courses:

CO220	Applied Computer Programming	3sh
IM350	Business Systems Technology	3sh
IM370	Advanced COBOL Application Programming	3sh
IM450	Data Base Theory and Application	3sh
IM451	Systems Analysis	3sh
IM470	Systems Design	3sh

Controlled electives:

At least one course from list: CO110, 250, 300, 310, 319, 320, 345		3sh
Two courses from list: IM382, IM480, IM481, QB380 or above CO courses		6sh(1)

Other Requirements: 0

Free Electives: 8-10

Total Degree Requirements: 124

(1) One course from AG300, AG301, or AG311 may be substituted

Department of Marketing

Krish Krishnan, Chairperson; Batra, Bebko, Garg, Sciulli, Soergel, Taiani, Weiers

The Bachelor of Science in Marketing program is designed to offer its majors solid grounding for entry into either line or staff marketing positions. Line positions are the most common and typically involve personal selling positions with either goods producers, services producers, or goods distributors (wholesalers and retailers). The graduate who is additionally qualified by exceptional experience or training may succeed in entering directly into upper line marketing management in a brand- or product-manager position. Staff positions might include marketing research, advertising and public relations, or customer services.

Bachelor of Science—Marketing

Liberal Studies: As outlined in Liberal Studies section 54-56
with the following specifications:
- Mathematics: MA121
- Social Science: EC121, PC101
- Liberal Studies elective: MA214, EC122, BE/CO/IM101, no courses with MK prefix

College: Business Administration Core 33
Required courses

AD321	Business and Interpersonal Communications	3sh
AG201	Principles of Accounting I	3sh
AG202	Principles of Accounting II	3sh
BL235	Introduction to Business Law	3sh
FI310	Finance I	3sh
IM300	Information Systems: Theory and Practice	3sh
MG310	Principles of Management	3sh
MG330	Production and Management Operations	3sh
MG495	Business Policy	3sh
MK320	Principles of Marketing	3sh
QB215	Business Statistics	3sh

Major: Marketing 27
Required courses:

AG300	Managerial Accounting	3sh
MK321	Consumer Behavior	3sh
MK420	Marketing Management	3sh
MK421	Marketing Research	3sh
MK422	Seminar in Marketing	3sh
EC	Advanced Economics Elective 300/400-level course	3sh

Controlled electives:

Three courses from list: DE332, DE333, EC331, EC345, MK430, MK431, MK432, MK433, MK493(3sh max)		9sh

Other Requirements: 0

Free Electives: 8-10

Total Degree Requirements: 124

Department of Office Systems and Business Education

Sharon Steigmann, Chairperson; Bianco, Brandenburg, Demand, Mahan, Moore, Moreau, Overton-Parker, Rowell; and professors emeriti Beaumont, Patterson Cordera, Stoner, Szul, Thomas, Woomer

This department offers three four-year programs and a two-year associate degree program. The associate degree is offered at the Armstrong and Punxsutawney campuses *only*. The department offers the following degrees: Bachelor of Science in Education with a Business Education major, Bachelor of Science with a major in Office Systems, and a two-year Associate of Arts degree in Computer and Office Information Systems. The program Bachelor of Science in Education with a Marketing and Distributive Education major is currently on inactive status. No new students are being admitted to this major, but they may elect to take these certifications in the regular business education program.

The Business Education major interested in teaching in high schools and vocational technical schools has a choice in the following certification areas: accounting, data processing, secretarial, office technologies, marketing, and distributive education. Students must select two or more areas of certification. One of the two areas must be Office Technologies, except that Distributive Education students must take Marketing as the second area.

The Office Systems program prepares students for careers such as office managers, supervisors, records managers, telecommunications consultants/managers, PC analysts, microcomputer user coordinators, and office systems analysts. Students who want a two-year program that prepares them for entering careers in business and government may select an associate degree program at the Armstrong and Punxsutawney campuses only. (A track in computer office information systems is available at the branch campuses.) Some but not all courses taken toward this degree would apply to a four-year program.

Business Education Major (B.S. in Education)

The IUP Business Education program is accredited by the National Council for Accreditation of Teacher Education (NCATE). The program leads to the degree of Bachelor of Science in Education and to certification in Pennsylvania as a business education teacher.

A student must apply to the dean of the College of Education to receive an initial certificate to teach in Pennsylvania's public schools. Certification to be a business education teacher is approved by the dean of the College of Education when a student has met all the requirements in professional education, Liberal Studies, and business education major courses. Students must attain a 2.5 overall average in order to student teach. The candidate for certification must also complete successfully the core battery and specialization sections of the National Teachers' Examination.

The curriculum in Business Education prepares students for a professional career in teaching office occupations. The six fields of certification available are accounting, data processing, office technologies, marketing, distributive education, and secretarial. Students may pursue the work of the entire curriculum or they may elect to pursue work according to their aptitudes as follows:

1. The complete program leads to certification in all of the high school business subjects. Those who possess aptitudes that indicate success in accounting, data processing, marketing, distributive education, office technologies, and secretarial may pursue the complete program if they choose. However, more than four years would be required in order to complete all of the certifications.
2. The accounting field includes all courses in the curriculum listed under that heading and meets the requirements for certification in accounting. Additionally, office technologies must be taken as a second certification area.
3. The secretarial field includes all courses in the curriculum listed under that heading and meets the requirements for certification in secretarial subjects. Additionally, office technologies must be taken as a second certification area.
4. The data processing field includes all courses in the curriculum listed under that heading and meets the requirements for certification in data processing. Additionally, office technologies must be taken as a second certification area.
5. The marketing certification area includes all courses in the curriculum listed under that heading and meets the requirements for certification in marketing. Additionally, office technologies must be taken as a second certification area.
6. Students who plan to get certification in the distributive education area must take marketing as a second area.

Practical Business Experience

Before graduation, each student must document completion of 500 hours of secretarial practice, accounting practice, data processing, clerical practice, or office-related experience. This experience should be in the field or fields in which the student is contemplating certification and can be acquired during summer vacations and in offices on the campus during the regular school term.

Bachelor of Science in Education—Business Education (*)

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Mathematics: BE111
Social Science: EC121, PC101
Liberal Studies electives: EC122, MA214, CO/IM101

College: 31-38
Professional Education Sequence

BE311	Methods and Evaluation in Business Education I	3sh
BE312	Methods and Evaluation in Business Education II	2-6sh
CM301	Technology for Learning and Instruction	3sh
ED242	Pre-student Teaching Experience I	1sh
ED342	Pre-student Teaching Experience II	1sh
ED441	Student Teaching	12sh
ED442	School Law	1sh
EP202	Educational Psychology	3sh
FE202	American Education in Theory and Practice	3sh
EX300	Education of the Exceptional in the Regular Classroom (or pass examination)	0-3sh

Major: 42
Required courses: Business Education Core

AD101	Introduction to Business	3sh
AD321	Business and Interpersonal Communications	3sh
AG201	Accounting Principles I	3sh
AG202	Accounting Principles II	3sh
BL235	Introduction to Business Law	3sh
BL337	Consumer Law	3sh
IM300	Information Systems: Theory and Practice	3sh
MK320	Principles of Marketing	3sh

Controlled electives:
Areas of Certification 18sh

Other Requirements: 0

Free Electives: 0

(#) Total Degree Requirements: 126-130

( ) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

Office Systems Major (Bachelor of Science Degree)

The office systems program is an intensive study of office systems emphasizing the decision-making aspect of office functions and the systems approach. The program includes in-depth experiences required for an understanding of the total office system and its relationship to the total business and economic system. Graduates will be able to pursue careers such as office managers/supervisors, records managers, telecommunications consultants/managers, PC analysts, microcomputer user coordinators, and office systems analysts.

Bachelor of Science—Office Systems

Liberal Studies: As outlined in Liberal Studies section 53-56
with the following specifications:
Mathematics: MA121
Social Science: EC121, PC101
Liberal Studies electives: MA214, EC122, BE/CO/IM101

College: 33
Required courses: Business Administration Core

AD321	Business and Interpersonal Communications	3sh
AG201	Accounting Principles I	3sh
AG202	Accounting Principles II	3sh
BL235	Introduction to Business Law	3sh
FI310	Finance	3sh
IM300	Information Systems: Theory and Practice	3sh
MG310	Principles of Management	3sh
MG330	Production and Management Operations	3sh
MG495	Business Policy	3sh
MK320	Principles of Marketing	3sh
QB215	Business Statistics	3sh

Major: 27

Required courses:

IM251	Business Systems Analysis and Design	3sh
OS301	Advanced Microcomputer Applications	3sh
OS313	Office Systems Technology	3sh
OS315	Records Administration	3sh
OS400	Telecommunications	3sh
OS412	Administrative Office Services	3sh
OS430	Office Systems	3sh
—	Business Electives	6sh

Other Requirements:(1) 0-1

Free Electives: 7-11

Total Degree Requirements: 124

(1) Student must pass BE134 with a "C" or better or pass an exemption exam

Associate of Arts Degree

This A.A. degree program is available only at the Armstrong and Punxsutawney campuses. Offering specialization in computer and office information systems (COIS), the Associate of Arts Degree in Business is designed to be a two-year curriculum with these objectives:

1. To provide business occupational education with the opportunity for specialization in COIS.
2. To enable the student to enter COIS positions in business and government.
3. To enable the student to upgrade his/her skills and knowledge to qualify for higher positions in business and government.

Associate of Arts—Business

Liberal Studies: as follows: 13

English: EN101		4sh
Humanities or Fine Arts: one course from lists		3sh
Social Science: EC101 or EC121, PC101		6sh

Major: Business (Associate) Core 32

Required courses:

AD101	Introduction to Business	3sh
AD221	Business Technical Writing	3sh
AG201	Accounting Principles I	3sh
AG202	Accounting Principles II	3sh
BE111	Foundations of Business Math	3sh
BE131	Keyboarding and Document Formatting	2sh
BE250	Electronic Office Procedures	3sh
BL235	Introduction to Business Law	3sh
FI220	Essentials of Finance	3sh
IM241	Introduction to Management Information Systems	3sh
IM245	Introduction to Microcomputers	3sh

Other Requirements: Computer and Office Specialization: 12

BE273	Word Processing Applications	3sh
IM251	Business Systems Analysis and Design	3sh
IM255	Business Applications in COBOL	3sh
IM260	Business Computer Application Project	3sh

Free Electives: 3

Other Requirements: 0

Total Degree Requirements: 60

Business Minors for College of Business Students

Minors in Accounting, Finance, Human Resources Management, Management, Management Information Systems, and Marketing are offered only for students who are majoring in one of the other majors in the College of Business and assume the common thirty-six-credit Business core.

Minor in Business Administration for Non-Business Majors

The College of Business offers, as a joint effort of its departments, a twenty-one credit hour minor for non-business majors. The program is designed to give non-business majors a general background in business with twelve credits of prescribed Liberal Studies courses and twenty-one credits of required business courses.

Prescribed Liberal Studies:

Social Science: EC121
Mathematics: MA214 or MA217
Liberal Studies Electives: BE/CO/IM101, EC122

Required Business Courses: 15

AG201	Accounting Principles I	3sh
AG202	Accounting Principles II	3sh
FI310	Finance I	3sh
MG310	Principles of Management	3sh
MK320	Principles of Marketing	3sh

Two of the following with advisement 6

AD321	Business and Interpersonal Communications	3sh
BL235	Introduction to Business Law	3sh
IM300	Information Systems: Theory and Practice	3sh

The College of Education

John W. Butzow, Dean
John Johnson, Interim Associate Dean
Alberta Dorsey, Interim Director of Student Teaching and Certification Programs

The departments of the College of Education offer programs leading to the degree of Bachelor of Science, the degree of Bachelor of Science in Education, the degree of Master of Arts, the degree of Master of Education, and the degree of Master of Science and doctoral programs leading to the degrees of Doctor of Education in Elementary Education and Doctor of Education in School Psychology. Appropriately, all teacher education and public education professional programs completed in the College of Education lead to certification for public school teaching or supervision in the Commonwealth of Pennsylvania.

The programs in teacher preparation at IUP enable the educator to become responsible for the planning, organization, and evaluation of an instructional program within the framework of a school setting. The teacher brings to this setting a broad background of liberal studies, an acceptable degree of mastery in a specialized field, and an understanding of the processes of human growth and learning. In this role the teacher creates, manages, and maintains an educational environment appropriate to the needs of the students to be served. The teacher uses social, physical, cognitive, and psychological data available on the individual student to plan, execute, and evaluate the instructional program. The teacher assumes a high degree of personal and professional responsibility in developing a philosophy of education in the development and management of a plan for professional growth. In support of this effort the college prepares school counselors, school psychologists, elementary and secondary principals, and specialists in Communications Media, Early Childhood, and Special Education.

The program of teacher preparation will provide an opportunity to gain expertise in the following generic competencies.

1. An understanding of the theoretical and practical aspects of human growth and development.
2. Knowledge of and experience with effective teaching learning techniques.
3. Utilization of learning resources and evaluation of teaching and learning effectively.
4. Effective classroom management techniques and recognition and response to differing behavioral patterns.
5. An understanding of the historical and philosophical bases of American education and a belief that professional development is a lifelong process.

Summary of Certification Programs Offered

Early Childhood Education	Bachelor of Science in Education
Elementary Education	Bachelor of Science in Education Master of Education Doctor of Education
Secondary Education	
English	Bachelor of Science in Education Master of Education
Biology	
Chemistry	
Earth and Space Science	
General Science	
Mathematics	
Physics	
Comprehensive Social Studies	
French	
German	
Spanish	
Art Education	For details see College of Fine Arts
Business Education	For details see College of Business
Home Economics Education	For details see College of Health and Human Services
Music Education	For details see College of Fine Arts
Health and Physical Education	For details see College of Health and Human Services
Special Education	
Education of Mentally Physically Handicapped	Bachelor of Science in Education Master of Education Master of Science
Hearing Impaired	Bachelor of Science in Education
Rehabilitation Education	Bachelor of Science
Speech Pathology and Audiology	Bachelor of Science in Education Master of Education Master of Science
Vocational Education	Bachelor of Science in Education
Graduate Programs (see Graduate School Catalog)	
Adult/Community Education	Master of Arts
Counselor Education	Master of Education
Educational Psychology	Master of Education
Reading Specialist	Master of Education
Student Personnel Services	Master of Arts
Certification (see Graduate School Catalog)	
Guidance Supervisor	Instructional Media Specialist
Reading Specialist	Elementary/Secondary Principals
School Psychologist	Special Education Supervisor

Degree Requirements

All degree candidates in the College of Education (except for three special programs) must complete satisfactorily a minimum of 124 semester hours in three categories: Liberal Studies, a specialized major field, and professional education. Major requirements in Education of Exceptional Persons, Elementary Education, Early Childhood Education, and Secondary Education are also under study and are expected to change as part of a collegewide revision of teacher education programs. Check with assigned adviser about changes.

Liberal Studies—52-55 semester hours, described under Requirements for Graduation.

Specialized major field—requirements listed under department offerings.

Professional Education—30 semester hours, as follows:

EP202	Educational Psychology	3sh
EP377	Educational Tests and Measurements	3sh
FE202	American Education in Theory and Practice	3sh
CM301	Technology for Learning and Instruction	3sh
ED242	Pre-student Teaching Experience I	1sh
ED342	Pre-student Teaching Experience II	1sh
ED442	School Law	1sh
Methods Course—(Teaching of _____)		3sh
One semester student teaching		12sh

Admission to Teacher Education Programs

All students in teacher education programs must achieve a 2.5 QPA by the time they complete their twenty-ninth semester hour. Students who do not achieve and maintain this level of achievement will be unable to take coursework in the teacher education core. Further details on these program requirements are given in the section on Academic Policies, Admission to Teacher Education.

Student Teaching

Student teaching is designed to be a learning experience for our teacher interns. The student teacher intern is learning to teach under the supervision of a full-time master teacher in an off-campus center. A university supervisor is assigned to work with individual student teachers and cooperating master teachers. To gain admission to student teaching, applicants must have achieved a minimum cumulative quality-point average of 2.5 as well as a 2.5 in both their subject area or major and in all professional education courses. Certain programs have standards beyond the minimum 2.5 (English, Spanish, History, Biology).

Certification

To be recommended for certification in their respective areas, applicants must have a cumulative 2.5 average in all university coursework, a 2.5 average in their subject area or major, at least a 2.5 average in their professional education courses, and have met all other program requirements. Students must show evidence of having achieved competency in Special Education (refer to section on academic policy for details).

Commonwealth Requirements for Teacher Certification

(except Vocational Instructional Certification. See section on Vocational Personnel Preparation.)

Certification standards for commonwealth public school teachers are established by the Department of Education and the State Board of Education. The chairperson of the department in which the student is majoring must verify to the dean of the College of Education that all qualifications are met. The dean of the college is authorized to determine final approval for certification.

Applicants for certification are required by state law to be of good mental and physical health and not addicted to narcotic drugs in any form.

The Instructional I certificate is issued to the beginning teacher upon graduation from the College of Education. All candidates for the Instructional I certificate must successfully pass the National Teacher Exam, general knowledge battery and selected specialty areas. IUP is a designated test site; registration for the NTE is through the University Testing Services in the Career Services office. With the completion of an additional twenty-four semester hours of collegiate and/or inservice courses and successful teaching experience, students may acquire the Instructional II certificate leading to permanent certification to teach in the Commonwealth of Pennsylvania.

The University Clinics

Two clinics/centers under the supervision of the College of Education offer diagnostic testing and remedial service and instruction in the following areas:

The Speech and Hearing Clinic provides diagnosis of speech problems, hearing tests and evaluations, and a regular program of therapy. Regularly enrolled students at the university may avail themselves of these services without charge.

The Child Study Center provides psychological assessment and parent consultation for children and adolescents with learning and/or behavior problems.

Graduate Programs

Information descriptive of M.Ed., Ed.D., and Teaching Internship programs may be found in the current issue of the Graduate School catalog.

The University School

Marilyn Howe, Director; Beisel, Hechtman, Johnson, Mambo, Marlin; and professors emeritae Davis, Fleming, Lingenfelter, Martin, Walthour

The University School provides a program of instruction from kindergarten through sixth grade. The University School provides professional laboratory experiences and research activities for faculty and students. Research and experimental activities are scheduled with the director of the University School. In sum, University School provides IUP students a unique opportunity to observe the most advanced learning styles and demonstrations for teaching in the year 2000.

Center for Vocational Personnel Preparation

Thomas W. O'Brien, Director

Vocational-Technical Professional Studies

Sandra J. Durbin, Chairperson; Debow, Downs, Dolecki, Dunn, Durbin, Jakubowski, Johnson, Keith, Mielke, Spewock, Sylves, Whisner

The Vocational-Technical Professional Studies program offers curriculums to prepare both preservice and inservice teachers, supervisors, and administrators in vocational-technical areas for secondary schools, area vocational-technical schools, and postsecondary schools including community colleges, and persons within industry serving as instructors and coordinators of training programs. The program serves both undergraduate and graduate students.

The curriculum in the B.S. in Education degree program in vocational-technical education is designed to prepare teachers for secondary schools, area vocational-technical schools, and postsecondary schools including community colleges and within industry as instructors and coordinators of training programs. A student enrolling in the vocational education curriculum may specialize in areas related to interest and/or previous work experience. Graduates have a wide selection of employment opportunities because of a rapid growth in vocational/technical offerings in both the public and private sectors.

A program leading to Pennsylvania professional certification as a secondary school vocational-technical teacher is also offered. Certification to teach vocational-technical education in the commonwealth's secondary schools is issued to individuals who meet statutory requirements, demonstrate occupational/technical proficiency on a nationally standardized occupational competency examination, and complete sixty credit hours of the Pennsylvania Department of Education-approved university program. In the IUP program, a plan of studies will be tailored to each student's unique background (i.e., electrical, electronics, data processing, drafting, welding, dental, etc.) and professional needs.

Certification to serve as a cooperative education teacher-coordinator in the commonwealth's secondary schools can be earned by completing a program of studies. Tailored to each student's individual background and professional needs, the program prepares individuals for managing industrial cooperative training and school-to-work transitional experiences. For persons holding a valid Pennsylvania Instructional Certificate, the program of studies will be individualized based upon educational credits earned.

The degree program is 124 semester hours, the vocational technical education certificate program is 60-62 semester hours, and the cooperative education teacher/coordinator certificate program is 66-68 semester hours.

Bachelor of Science in Education—Vocational-Technical Education

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55
- Social Science: PC101
- Liberal Studies electives: no courses with VO prefix

College: 6
- Professional Educational Sequence:
  - EP202 Educational Psychology 3sh
  - FE202 American Education in Theory and Practice 3sh

Major: 30
- Required courses:
  - VO100 Preparation of the Vocational Professional I 15sh
  - VO400 Preparation of the Vocational Professional II 15sh

Other Requirements: 27
- Vocational Technical
  - VO450 Technical Preparation of the Vocational Professional 24sh
  - EN310 Public Speaking 3sh
  - VO401 Special Topics in Vocational Technical Preparation 3-12sh
  - VO402 Special Topics in Vocational Pedagogical Preparation 3-15sh
  - — Other as approved

Free Electives: 6-8

Total Degree Requirements: 124

Certificate—Vocational-Technical Education

Liberal Studies: As follows: 21-23
- Mathematics: MA101 3sh
- English: EN101 3-4sh
- Humanities: one course from lists 3sh
- Fine Arts: one course from list 3sh
- Natural Science: one course, lab or non-lab 3-4sh
- Social Science: PC101 3sh
- Liberal Studies electives: one course, no course with VO prefix 3sh

College: 6
- Professional Educational Sequence:
  - EP202 Educational Psychology 3sh
  - FE202 American Education in Theory and Practice 3sh

Major: 33
- Required courses:
  - VO100 Preparation of the Vocational Professional I 15sh
  - VO400 Preparation of the Vocational Professional II 15sh
  - EN310 Public Speaking 3sh

Free Electives: 0

Total Certification Requirements: 60-62

Certificate as Secondary School Cooperative Education Teacher/Coordinator

Liberal Studies: As follows: 21-23
- Mathematics: MA101 3sh
- English: EN101 3-4sh
- Humanities: one course from lists 3sh
- Fine Arts: one course from list 3sh
- Natural Science: one course, lab or non-lab 3-4sh
- Social Science: PC101 3sh
- Liberal Studies electives: one course, no courses with VO prefix 3sh

College: 6
- Professional Educational Sequence:
  - EP202 Educational Psychology 3sh
  - FE202 American Education in Theory and Practice 3sh

Major: 39
- Required courses:
  - VO100 Preparation of the Vocational Professional I 9sh
  - VO400 Preparation of the Vocational Professional II 9sh
  - VO402 Special Topics in Vocational Pedagogical Prep 15sh
  - VO450 Technical Prep of the Vocational Professional 3sh
  - EN310 Public Speaking 3sh

Free Electives: 0

Total Certification Requirements: 66-68

Department of Communications Media

Kurt P. Dudt, Chairperson; Ausel, Handler, Juliette, Kanyarusoke, Kornfeld, Lamberski, Leidman-Golub, Start, Willis, Wilson; and professors emeriti Klingensmith, MacIsaac, Murray, Sargent, Young

The department offers a Bachelor of Science in Communications Media and two minors, one in Communications Media and one in Educational Technology. The department also serves preservice teachers and other students who are required to complete the basic course in Technology for Learning and Instruction, CM301.

The philosophy of the Communications Media Department is to prepare generalists in the area of Communications. Our students can choose from one of three tracks within the department, depending on their career interests: Product Development, Electronic Media, or Training and Development. Regardless of the sequence chosen, students may select courses outside of their sequence in order to broaden their skills.

The faculty within the department offers a wide variety of experience in all areas of Communications Media. With the combination of classroom work and the optional internship program, departmental graduates are competitive for positions in various areas. Students graduating from this major have obtained positions in such areas as radio, television, cable television, public relations, advertising agencies, medical media centers, and corporate media centers.

The department has two minors, one in Communications Media and one in Educational Technology. The minor in Communications Media is an eighteen-credit program designed to complement any major. The minor in Educational Technology is a twenty-four-credit program designed for students in the College of Education who are completing a teaching degree.

Students changing majors from other academic departments within the university are required to have a 2.5 grade-point average before transfer will be approved.

Bachelor of Science—Communications Media

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 54-55
- Natural Science: laboratory sequence required (GS101/102-103/104 recommended)
- Social Science: PC101
- Liberal Studies electives: BE/CO/IM1101, no courses with CM prefix

College: 3
- EP202 Educational Psychology or
- EP388 Interpersonal Effectiveness and Communication 3sh

Major: 42-45
Required courses:
CM101 Communications Media in American Society 3sh
CM102 Basic Technology 1sh
CM103 Basic Communications Research 1sh
CM200 Images 3sh
CM395 Career Planning in Communication 1sh
Controlled electives: According to Track
Product Development: CM303 (required), CM271, 440, 444, 449, 451 (strongly recommended), CM390, 441, 445, 450, 472, 473, 474, 475, 476, 477, 478, 480, 490 (also recommended) 33sh
Electronic Media: CM403 (required), 404, 405, 451, 460 (strongly recommended), CM452, 453, 454, 456, 480, 455, 390, 490 (also recommended) 36sh
Training and Development: CM330, 335(required), CM271, 303, 403, 404, 430, 435, 440, 449, 451 (strongly recommended), CM390, 480, 490, 495 (also recommended) 36sh

Other Requirements: 15-18
Out-of-College Requirement (adviser approval) by Track
Product Development Track 18sh
Electronic Media Track 15sh
Training and Development Track 15sh

Free Electives: 6-7

Total Degree Requirements: 124

Minor—Communications Media 18
Required courses:
CM101 Communications Media in American Society 3sh
CM— Electives in Communication Media 15sh

Minor—Educational Technology 24
Required courses:
CM101 Communications Media in American Society 3sh
CM460 Alternative Systems of Communication 3sh
CO101 Microbased Computer Literacy 3sh
CM— Electives in Communications Media 15sh

Department of Counseling, Adult Education, and Student Affairs

Gary Dean, Chairperson; Culp, Ferro, Fontaine, Thomas, Witchel, Worzbyt; and professors emeriti Mahler, Pesci, Saylor, Spinelli, Washburn, Wilson

The undergraduate courses offered by the Department of Counseling, Adult Education, and Student Affairs are available as electives for undergraduates who wish to increase their interpersonal relationship skills and for school personnel seeking a broad understanding of helping roles in the school setting.

The Adult/Community Education and Student Affairs in Higher Education programs are also offered as graduate degrees in this department.

Department of Educational Psychology

William F. Barker, Chairperson; Briscoe, Hoellein, Levinson, Quirk, Rafoth, Rattan; and professors emeriti DeFabo, Meadowcroft, Shank, Yanuzzi

The department services undergraduate and graduate students. Undergraduate students may declare a minor in Educational Psychology by making application to the department chairperson. Fifteen semester hours from the courses are required for the minor in educational psychology.

The department also offers the M.Ed. in Educational Psychology as well as a post-master's certification and a Doctor of Education in School Psychology. Refer to the current Graduate School Catalog for details.

Department of Foundations of Education

Kurt P. Dudt, Interim Chairperson; Merryman, Penta, Rotigel, Thibadeau; and professor emeritus Chu

Graduate courses offered by this department include Comparative, Historical, Philosophical, and Social Foundations of Education; Curriculum Development, Professional Negotiations in Education; and International Education Studies Program. For specific information concerning these courses, see the current edition of the Graduate School Catalog.

Department of Professional Studies in Education

Edwina B. Vold, Chairperson; Bieger, Cole Slaughter, Corbett, DeCicco, Dorsey, Elliott, Fennimore, Gates, Gerlach, Hartman, Jalongo, Kaufman, King, Kupetz, Mikkelsen, Millward, Mark Twiest, Meghan Twiest, L. Vold, Williams, Willis; and professors emeriti Glott, Lore, Lott, Mott, Reilly, Rizzo

Elementary Education Program

The Elementary Education program is designed to provide learning experiences which will assist students in developing into highly competent and effective teachers in grades K-6. Students are able to expand their knowledge through coursework and field experiences which embody content knowledge of liberal studies, pedagogy, curriculum, human development and learning, and a historical and philosophical basis to undergird one's professional behavior. [Effective Fall, 1991: A 2.5 cumulative QPA is required to apply for teacher certification, to take major courses in the department, to apply for Junior Standing, and to student teach.]

Early Childhood Education Program

The Early Childhood Education Program prepares students to select from among a variety of techniques and strategies those which appropriately expand children's cognitive, social, emotional, and physical development. Through lectures, research, and on-site experiences with young children, students are able to expand their own knowledge of and attitudes toward education of young children N-3rd grade.

Students must meet the Requirements Leading to Teacher Certification as outlined in the Academic Policies section of this catalog.

Graduate Programs

Programs leading to the M.Ed. and Ed.D. degrees are described in the current issue of the Graduate School Catalog. Internships and assistantships are available.

Bachelor of Science in Education—Elementary Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53
Mathematics: MA151
Natural Science: SC 101, 102, 103, and 104 (1)
Social Science: GE101-GE104 (one course), PC101
Liberal Studies electives: MA152 (2), no courses with EL prefix

College: 29
Professional Education Sequence
CM301 Technology for Learning and Instruction 3sh
ED242 Pre-student Teaching I 1sh
ED342 Pre-student Teaching II 1sh
ED441 Student Teaching 12sh
ED442 School Law 1sh

ED499	Multicultural Education	2sh
EP202	Educational Psychology	3sh
EP377	Educational Tests and Measurements	3sh
FE202	American Education in Theory and Practice	3sh

Major: 32

Required courses:

EE211	Music for the Elementary Grades	2sh
EE213	Art for the Elementary Grades	2sh
EL215	Child Development	3sh
EE221	Children's Literature	3sh
EE222	Teaching of Reading I	3sh
EE312	Teaching of Elementary Science	2sh
EE313	Teaching Mathematics in the Elementary School	3sh
EE314	Teaching of Health and Physical Education	2sh
EL356	Pedagogy I	3sh
EE357	Pedagogy II	3sh
EE411	Teaching of Social Studies	3sh
EE425	Language Arts Across the Curriculum	3sh

Free Electives: (3) 11

Total Degree Requirements: 125

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) This sequence of 10 credits fulfills the Liberal Studies natural science requirement and one Liberal Studies elective (3cr).
(2) For students who test out of MA152, consult your adviser for suggested math courses.
(3) Students must pass Competency Exam in Special Education or pass EX300

Bachelor of Science in Education—Early Childhood Education (*)

Liberal Studies: As outlined in Liberal Studies section 56
with the following specifications:
Mathematics: MA151
Natural Sciences: SC101, 102, 103, and 104
Social Science: GE101, 102, 103, or 104, PC101
Liberal Studies electives: no courses with EE prefix

College: 29

Professional Education Sequence (1)

CM301	Technology for Learning and Instruction	3sh
ED242	Pre-student Teaching Clinical Experience I	1sh
ED342	Pre-student Teaching Clinical Experience II	1sh
ED441	Student Teaching	12sh
ED442	School Law	3sh
EP202	Educational Psychology	3sh
EP377	Educational Tests and Measurements	3sh
FE202	American Education in Theory and Practice	3sh
ED499	Multicultural/Multiethnic Education	2sh

Major: 36

Required courses:(1)

EE200	Introduction to Early Childhood Education	3sh
EE220	Language Developemtn and Children's Literature	3sh
EE310	Integrated Curriculum I (Math, Science)	3sh
EE311	Integrated Curriculum II (Social Science)	3sh
EE312	Aesthetic Experiences for Young Children	3sh
EE315	Development and Learning through Play	3sh
EE451	Teaching Primary Reading	3sh
EL215	Child Development	3sh
EL357	Pedagogy II	3sh
EX300	Education of the Exceptional Child	3sh(2)
EX464	Preschool Education of the Handicapped	3sh
HE426	Techniques of Parent Education	3sh
MA450	Preschool and Primary Math	3sh

Free Electives: 4-6

Total Degree Requirements: 125

( ) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) A 2.5 overall grade-point average is required to register of major courses.
(2) If competency exam is passed, an additional free elective may be substituted.

Foreign Languages and International Studies Program for Elementary Teaching (FLISET)(1)

Required courses: 22(2)

SP201	Intermediate Spanish	4sh
SP221	Intermediate Conversation	3sh
SP321	Advanced Conversation	3sh
SP290	Intensive Spanish for Elementary Teaching	3sh
SP390	Teaching of Elementary Content through the Spanish Language	3sh
SP404	Advanced Spanish Grammar	3sh

Controlled elective: one course

SP230, SP342, SP344		3sh

Other Requirements:
Students should take either GE252 or PS387 as their non-Western course.
Study/internship in Mexico for six to eight weeks the summer following junior year
Student teaching experience in immersion classroom.

(1) Program is open to elementary education majors wishing to develop an academic specialty which will prepare them to teach in elementary programs where content teaching in the foreign language is the objective A student must attain a minimum level of Intermediate High speaking proficiency on the ACTFL/ETS scale.
(2) Credit reduction pending Senate approval, based on prior curriculum changes.

Department of Special Education and Clinical Services

Clarice K. Reber, Chairperson; Bormann, Chapman, Domaracki, Fiddler, Marshak, Mease, Munro, Newell, Nowell, Shane, Stein, Turton; and professors emeriti M. Bahn, Morris, Scanlon

This department offers the degree of Bachelor of Science in Education in any one of four majors. Each of the four majors follows a prescribed sequence of courses. Students may elect to major in any one of the following fields:

A. Education of Exceptional Persons
B. Speech-Language Pathology and Audiology
C. Rehabilitation
D Education of Hearing Impaired

The following grade policy applies to all four undergraduate programs of study in the Department of Special Education and Clinical Services. Individual students may appeal any aspect of the policy by making a formal written request to the Departmental Appeals Committee.

1. No more than one "D" in major courses will be accepted toward graduation and certification.

2. No "D" is permitted as the final recorded grade in any of the following courses.

ED421: Student Teaching
ED441: Student Teaching
EH308: Language for the Hearing Impaired
EX425: Methods and Curriculum (Mild/Moderate Disabilities)
EX435: Methods and Curriculum (Severe/Profound Disabilities)
RH322: Rehabilitation Case Study and Interpretation
RH488: Field Training in Rehabilitation
RH493: Field Training in Rehabilitation
SH122: Clinical Phonology

A. Education of Exceptional Persons

Completion of the sequence of study in this major leads to Pennsylvania Department of Education special education certification (Mentally and/or Physically Handicapped Certificate). Students will be prepared to teach persons with mental retardation, autism, developmental disabilities, learning disabilities, brain injuries, emotional/behavioral disorders, physical disabilities, and multiple disabilities. Academic coursework and field experiences are integrated within the course of study. The program also provides a foundation for pursuing additional study at the graduate level.

Bachelor of Science in Education—Education of Exceptional Persons(*)

Liberal Studies: As outlined in Liberal Studies section 54-55
with the following specifications:
Mathematics: MA151
Social Science: PC101
Natural Science: laboratory science required (SC105-106 recommended)
Liberal Studies electives: no course with EX prefix

College: 27
Professional Education Sequence:

CM301	Technology for Learning and Instruction	3sh
ED242	Pre-Student Teaching Clinical Experiences I	1sh
ED342	Pre-Student Teaching Clinical Experiences II	1sh
ED421	Student Teaching (Mild/Moderate)	6sh
ED441	Student Teaching (Severe/Profound)	6sh
ED442	School Law	1sh
EP202	Educational Psychology	3sh
EP377	Educational Tests and Measurements	3sh
FE202	American Education in Theory and Practice	3sh

Major: 43
Required Courses:

EX111	Introduction to Exceptional Persons	3sh
EX112	Typical and Atypical Growth and Development	3sh
EX221	Methods of Teaching Mathematics to Persons with Disabilities	3sh
EX222	Methods of Teaching Reading to Persons with Disabilities	3sh
EX321	Methods of Teaching Language Arts to Persons with Disabilities	3sh
EX322	Methods of Teaching Content Area Subjects to Persons with Disabilities	3sh
EX340	Introduction to Behavior Management	3sh
EX416	Education of Persons with Emotional or Behavioral Disorders	3sh
EX417	Education of Persons with Mental Retardation or Developmental Disabilities	3sh
EX418	Education of Persons with Physical or Multiple Disabilities	3sh
EX419	Education of Persons with Brain Injuries or Learning Disabilities	3sh
EX425	Methods and Curriculum (Mild/Moderate Disabilities)	3sh
EX435	Methods and Curriculum (Severe/Profound Disabilities)	3sh
EX440	Ethical and Professional Behavior	1sh
SH254	Classroom Management of Language Disorders	3sh

Total Degree Requirements: 124-125

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."

B. Speech-Language Pathology and Audiology

Completion of the sequence of courses in Speech-Language Pathology and Audiology serves as a preprofessional program for students planning to become practicing speech-language pathologists or audiologists. Students entering the undergraduate program should be aware of the following:

1) IUP is accredited by the Educational Standards Board of the American Speech-Language-Hearing Association and qualifies a person for the Certificate of Clinical Competence from the American Speech-Language-Hearing Association and Pennsylvania State Licensure.

2) National certification, state licensure, and Pennsylvania Department of Education Certification in Speech-Language Impaired are available only to holders of the master's degree in Speech-Language Pathology.

3) Students will need to project a minimum QPA of 3.0 to qualify for admission to most graduate schools.

4) Upon completion of a master's degree at IUP, students will be prepared to provide services in work settings such as hospitals, community clinics, public health programs, and rehabilitation settings.

5) Students who elect to prepare for certification in Speech-Language Impaired from the Pennsylvania Department of Education must successfully complete the College of Education Requirements listed below prior to enrollment in the Master of Science degree in the Speech-Language Pathology program at IUP.

The University Speech and Hearing Clinic serves as the laboratory for the undergraduate clinical practicum. Prior to registration for the clinical practicum course (SH420), students must earn a minimum QPA of 3.0 and complete the following hours of observation through enrollment in ED242 and ED342:

A 25 hours of observation in speech-language pathology supervised by an IUP faculty member who holds a Certificate of Clinical Competence in Speech-Language Pathology.
B 20 hours of classroom observation
1. Five hours in regular education classrooms, K-3
2. Five hours in special education classrooms.
3. Five hours in regular education classrooms with integrated special students.
4. Five hours in community facilities such as preschools, sheltered workshops, etc. Services in this category should be of a noneducational, nonspeech pathology type.

Bachelor of Science in Education—Speech-Language Pathology and Audiology (*)

Liberal Studies: As outlined in Liberal Studies section 54-55
with the following specifications:
Mathematics: MA217
Social Science: PC101
Natural Science: laboratory science sequence required (BI103-104 recommended)
Liberal Studies electives: no courses with SH prefix, PC310 recommended

College(*): The following are required ONLY for students 0-13
electing the pre-teacher certification track:
Professional Education Sequence:

CM301	Technology for Learning Instruction	3sh
ED442	School Law	1sh
EP202	Educational Psychology	3sh
FE202	American Education in Theory and Practice	3sh
SH412	Organization and Administration of Speech and Hearing Programs	3sh

Major: 38-41
Required courses:

ED242	Pre-Student Teaching Clinical Experience I	1sh
ED342	Pre-student Teaching Clinical Experience II	1sh
EX111	Introduction to Exceptional Persons	3sh
EX362	Psychology of Reading in Language Processing	3sh
SH111	Introduction to Communication Disorders	3sh
SH122	Clinical Phonology	3sh
SH222	Introduction to Audiology	3sh
SH242	Speech Science I	3sh
SH251	Anatomy and Physiology of the Speech and Hearing Mechanism	3sh
SH311	Aural Rehabilitation	3sh(1)
SH334	Language Development	3sh
SH342	Speech Science II	3sh

SH406	Articulation and Language Disorders	3sh
SH408	Stuttering and Voice Disorders	3sh

Optional:

SH420	Speech Clinic	3sh

Free Electives: ED499 recommended

General Track	28-32
Pre-Teacher Certification Track	15-19

Total Degree Requirements: 124

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."

(1) A minimum QPA of 2.5 is required to enroll in all 300 and 400 level courses for both pre-teacher certification and non-certification speech-language pathology majors.

C. Rehabilitation

Completion of this program leads to the Bachelor of Science in Education with a specialization in rehabilitation. The program is designed for students seeking career opportunities with health and welfare agencies and institutions and also provides a foundation for pursuing additional work at the graduate level.

Bachelor of Science—Rehabilitation

Liberal Studies: As outlined in Liberal Studies section 54-55
with the following specifications:
Mathematics: MA217
Natural Science: Laboratory Science sequence required
Social Science: PC101, SO151
Liberal Studies electives: PC321, no courses with RH prefix

Major: 48

Required courses:

RH200	Introduction to Rehabilitation	3sh
RH211	Medical Aspects of Rehabilitation	3sh
RH220	Neurological Basis of Disability	3sh
RH312	Psychological Basis of Disability	3sh
RH321	Principles and Methods of Rehabilitation	3sh
RH322	Rehabilitation Case Study and Interpretation	3sh
RH360	Rehabilitation Counseling: Strategies	3sh
RH410	Vocational Assessment in Rehabilitation	3sh
RH412	Occupational Aspects of Rehabilitation	3sh
RH422	Current Topics in Rehabilitation	3sh
RH460	Advanced Rehabilitation Counseling	3sh
RH484	Directed Rehabilitation Activities	3sh
RH488	Field Training in Rehabilitation	6sh
RH493	Field Training in Rehabilitation	6sh

Other Requirements: 6-7

Required course:

EX111	Introduction to Exceptional Persons	3sh

Controlled elective: 3-4sh

BI155	Human Physiology and Anatomy	4sh
HP221	Human Structure and Function	3sh

Free Electives: 14-16

Total Degree Requirements: 124

D. Education of Hearing Impaired

Completion of the sequence of courses in Education of Hearing Impaired leads to a Bachelor of Science Degree in Education and Pennsylvania Department of Education certification as a teacher of the hearing impaired. Students are provided with the basic skills to teach in special classes for hard-of-hearing or deaf individuals.

Students enrolled in this sequence of study are prepared to assume positions as itinerant hearing therapists and classroom teachers for individuals ranging from preschoolers to adults. Work settings may include public schools, continuing education programs, and home training situations.

Observation, clinical experience, and practicum are required prior to placement in a school environment for the student teaching experience. The student will complete the following 50 hours of observation through enrollment in ED242:

A. 20 hours of observation of itinerant and self-contained classrooms for the hearing impaired
B. 10 hours of observation in regular education classrooms.
C. 15 hours of observation in special education classrooms.
D. 5 hours of observation in a noneducational setting.

The student will complete 50 hours of individual clinical experience through enrollment in EH330 and 25 hours of school-based practicum through enrollment in ED342.

Bachelor of Science in Education—Education of Hearing Impaired (*)

Liberal Studies: As outlined in Liberal Studies section 54-55
with the following specifications:
Mathematics: MA151
Social Science: PC101
Natural Science: Laboratory Science Sequence Required
Liberal Studies electives: no courses with EH prefix

College: 30

Professional Education Sequence:

CM301	Technology for Learning and Instruction	3sh
ED242	Pre-student Teaching Clinical Experience I	1sh
ED342	Pre-student Teaching Clinical Experience II	1sh
ED421	Student Teaching-Hearing Impaired (Pri-Elem)	6sh
ED441	Student Teaching-Hearing Impaired (Jr-Sr H.S.)	6sh
ED442	School Law	1sh
EH360	General Methodology for Education of Hearing Impaired	3sh
EP202	Educational Psychology	3sh
EP377	Educational Tests and Measurements	3sh(1)
FE202	American Education in Theory and Practice	3sh

Major: 38

Required courses:

EH114	Introduction to Hearing Impaired	3sh
EH115	Introduction to Sign Language	1sh
EH244	Intermediate Sign Language	1sh
EH307	Speech for Hearing Impaired	3sh
EH308	Language for Hearing Impaired	3sh
EH330	Hearing Practicum	2sh
EH331	Advanced Sign Language	1sh
EH365	Parent-Preschool Programs for Hearing Impaired	3sh
EX111	Introduction to Exceptional Persons	3sh
EX222	Methods of Teaching Reading to Persons with Disabilities	3sh
SH222	Introduction to Audiology	3sh
SH334	Language Development	3sh
SH242	Speech Science I	3sh
SH311	Aural Rehabilitation	3sh

Controlled electives:

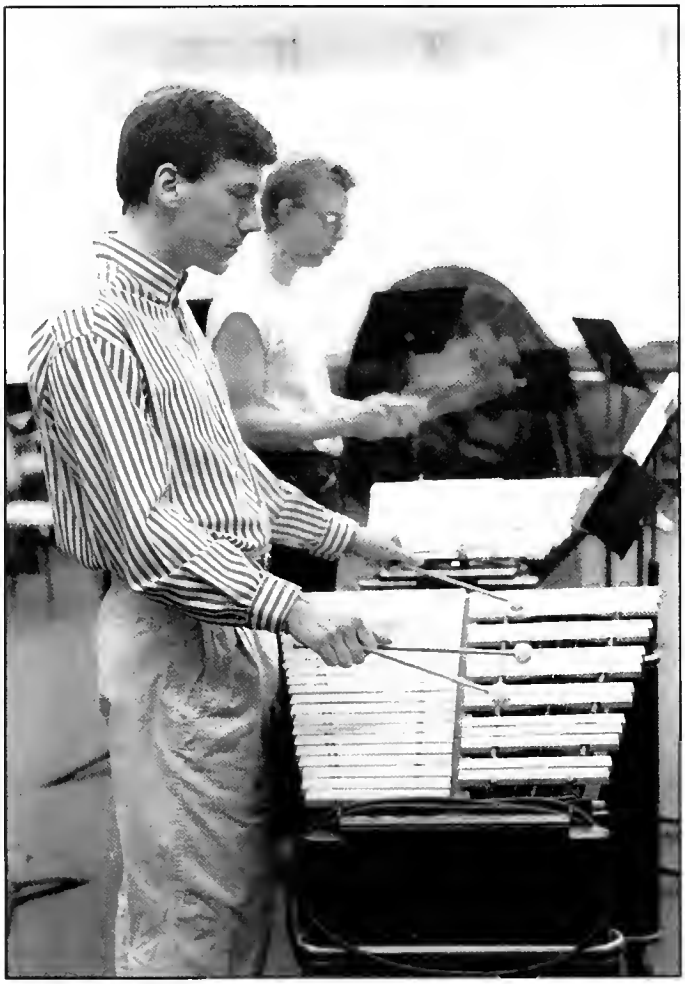
One course from: EX112 or EL215 or HE218		3sh

Free Electives: 1-2

Total Degree Requirements: 124

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."

(1) MA217: Probability and Statistics may substitute for EP377 but may not replace MA151.



The College of Fine Arts

John Hajdu Heyer, Dean
Marjorie E. Arnett, Assistant Dean

The College of Fine Arts has professional programs in art, music, and theater and awards the Bachelor of Arts and Bachelor of Fine Arts degrees. Programs leading to certification to teach are offered in cooperation with the College of Education and lead to the Bachelor of Science in Education degree.

There are four objectives for the College of Fine Arts:
1) to provide special academic programs for majors in the arts
2) to provide service courses for other departmental majors
3) to offer all university students general courses in the arts
4) to make cultural programs in the arts available to the university, the surrounding community, and the local region

There are no additional college requirements for graduation beyond the university and departmental requirements listed in other sections of this catalog.

General Fine Arts Major

A general fine arts major program is available for those students desiring to take coursework in art, dance, interior design, media, music, and theater. This program is offered in conjunction with the College of Education and the College of Health and Human Services. This interdisciplinary program, including an opportunity for an internship (FA493), is coordinated through the Office of the Dean, College of Fine Arts, where additional information is available.

Bachelor of Arts—General Fine Arts

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Liberal Studies electives: no courses with FA prefix

Major: 36
Required courses:
Courses must come from three departments, one of which must be Art, Music, or Theater
Controlled electives:
Art: Art Education (AE), Art History (AH), Art Studio (AR)
Music: Music (MU), Music History (MH), or Applied Music (AM)
Theater: Any Theater (TH) courses
Consumer Services: Interior Design courses (CS)
Communications Media: Any courses (CM)
Dance: (HP) Dance courses

Other Requirements: 0
At least one-third (12) of the major credits must be in courses numbered in the 300s and 400s.
No course that is used to fulfill Liberal Studies requirements may be used again to meet major requirements.

Free Electives: 33-35

Total Degree Requirements: 124

Department of Art

Anthony G. DeFurio, Chairperson; Ali, Battaglini, Ben-Zvi, Boerner, Burwell, Clark, Clay, Hamilton, Hedman, Johnson, Lacey, Nestor, J. Slenker, R. Slenker, Weiland; and professors emeriti Balsiger, Cronauer, Dongilla, Dropcho, Innes, Kipp, McVitty, Seelhorst, Vislosky, Wert

The Department of Art provides both general and special courses in art, directed toward the development of the student's creative and expressive abilities. Degrees offered are the Bachelor of Arts with tracks in either Art History or Art Studio, the Bachelor of Fine Arts in Art Studio, and the Bachelor of Science in Education in Art Education. The degree in art education provides certification for teaching art in grades K-12 in the schools of Pennsylvania.

The Department of Art offers a cooperative program with the Art Institute of Pittsburgh. Students interested in commercial art, with departmental approval, may earn credit toward their major at the Art Institute.

All art majors are obligated to fulfill the university requirements for Liberal Studies. Art education majors must maintain a 2.5 average overall Q.P.A., and this is a prerequisite to student teaching.

A minor in art is available, consisting of at least 18 semester hours in art courses approved by the chairperson of the Department of Art.

Acceptance by the Department of Art as a major requires the submission of a portfolio and approval of the portfolio committee. Detailed information will be sent to the applicant upon request.

Bachelor of Arts—Art/History Track

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Fine Arts: MH101 or TH101
Liberal Studies electives: no courses with AH prefix

Major:
Foundation Required 15

AR100	Arts of the 20th Century	3sh
AR111	Drawing	3sh
AR112	Fundamentals of Drawing and Design	3sh
AR113	Design	3sh

AR114	Color and Two-Dimensional Design	3sh
Art History Required:		30
AH205	Ancient to Medieval Art	3sh
AH206	Renaissance to Baroque Art	3sh
AH211	Modern Art	3sh
AH222	Art in America	3sh
AH407	Medieval Art	3sh
AH408	Italian Renaissance	3sh
AH409	Baroque and Rococo Art	3sh
AH412	Classical Art	3sh
AH413	Senior Seminar (To be taken during senior year)	3sh
AH416	Northern Renaissance Art	3sh
Free Electives(1):		24-26
AH406	Ancient Migratory Art	3sh
AH424	Art of the East	3sh
AH426	Pre-Columbian Art	3sh
AH492	Internship	3-12sh
	Total Degree Requirements:	24

(1) It is recommended that the student of art history make judicious choices of elective courses in consultation with the major adviser. Students may consider additional foundation or advanced studio electives, advanced art history, and related academic electives. Course selection in a foreign language is strongly recommended

Bachelor of Arts—Art/Studio

Liberal Studies: As outlined in Liberal Studies section 50-52
with the following specifications:
Fine Arts: Fulfilled by Art History counted in major
Liberal Studies electives: AH206; no courses with AR prefix

Major:

Foundation required		15
AR100	Arts of the 20th Century	3sh
AR111	Drawing	3sh
AR112	Fundamentals of Drawing and Design	3sh
AR113	Design	3sh
AR114	Color and Two-Dimensional Design	3sh
Foundation electives (Select 5 of the following 8 courses):		15
AR211	Painting	3sh
AR213	Wood/Furniture Design	3sh
AR214	Ceramics	3sh
AR215	Sculpture	3sh
AR216	Basic Metal Techniques	3sh
AR217	Printmaking	3sh
AR218	Graphic Design	3sh
AR219	Fibers	3sh
Art History required:		9
AH205	Ancient to Medieval Art	3sh
AH206	Renaissance to Baroque Art	3sh(1)
AH211	Modern Art	3sh(2)
AH413	Senior Seminar (To be taken during senior year)	3sh
Advanced Studio required: (3)		21
Advanced Studio courses to be selected from list: AR421, AR451, AR452, AR453, AR454, AR455, AR457, AR459, AR460, AR481, AR493 (4)		
Free Electives:		12-14
	Total Degree Requirements:	124

(1) Credits counted under Liberal Studies electives.
(2) AH222: Art in America may be substituted for AH211.
(3) Students must complete 3 credits within an advanced studio before permission will be granted to enroll in the 6-credit component of the advanced level. Permission of the instructor is a prerequisite to all 6-credit advanced studios.
(4) Inclusion of internship credits toward any portion of fulfillment of degree requirements must be approved by the departmental chair and student's major adviser. Approval must be obtained in writing prior to enrollment.

Bachelor of Fine Arts—Studio

Liberal Studies: As outlined in Liberal Studies section 50-52
with the following specifications
Fine Arts: Fulfilled by Art History counted in major
Liberal Studies electives: AH206; no courses with AR elective

Major:

Foundation required:		15
AR100	Arts of the 20th Century	3sh
AR111	Drawing	3sh
AR112	Fundamentals of Drawing and Design	3sh
AR113	Design	3sh
AR114	Color and Two-Dimensional Design	3sh
Foundation electives (Select 5 of the following 8 courses):		15
AR211	Painting	3sh
AR213	Wood/Furniture Design	3sh
AR214	Ceramics	3sh
AR215	Sculpture	3sh
AR216	Basic Metal Techniques	3sh
AR217	Printmaking	3sh
AR218	Graphic Design	3sh
AR219	Fibers	3sh
Art History required:		9
AH205	Ancient to Medieval Art	3sh
AH206	Renaissance to Baroque Art	3sh(1)
AH211	Modern Art	3sh(2)
AH413	Senior Seminar	3sh
Advanced Studio required: (3)		27
Primary Advanced Studio Concentration		18
Minor Advanced Studio Concentration		9sh
Courses from list: AR421, AR451, AR452, AR453, AR454, AR455, AR457, AR459, AR460, AR481, AR493 (4)		
Free electives:		6-8
	(#) Total Degree Requirements:	125-127

(1) Credits counted under Liberal Studies electives.
(2) AH222: Art in America may be substituted for AH211.
(3) The foundation-level course must be successfully completed before a student will be permitted to enroll in the 6-credit component of that specific studio course. Permission of the instructor is a prerequisite to all 6-credit advanced studios.
(4) Inclusion of internship credits toward any portion of fulfillment of degree requirements must be approved by the departmental chair and student's major adviser. Approval must be obtained in writing prior to enrollment.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation

Bachelor of Science in Education—Art Education (*)

Liberal Studies: As outlined in Liberal Studies section 50-52
with the following specifications:
Fine Arts: Fulfilled by Art History counted in major.
Social Science: PC101
Liberal Studies electives: AH206; no courses with AR prefix

College:

Professional Education Sequence:		24
CM301	Technology for Learning and Instruction	3sh
ED421	Student Teaching Elementary	6sh
ED441	Student Teaching Secondary	6sh
ED242	Pre-student Teaching I	1sh
ED342	Pre-student Teaching II	1sh
ED442	School Law	1sh
EP202	Educational Psychology	3sh
FE202	History/Philosophy of American Education	3sh

Major:

Foundation required:		15
AR100	Arts of the 20th Century	3sh
AR111	Drawing	3sh
AR112	Fundamentals of Drawing and Design	3sh
AR113	Design	3sh

AR114	Color and Two-Dimensional Design	3sh
Foundation electives (Select 5 of the following 8 courses).		15
AR211	Painting	3sh
AR213	Wood/Furniture Design	3sh
AR214	Ceramics	3sh
AR215	Sculpture	3sh
AR216	Basic Metal Techniques	3sh
AR217	Printmaking	3sh
AR218	Graphic Design	3sh
AR219	Fibers	3sh
Art Education required:		9
AE315	Survey in Art Education	3sh
AE317	Art Education Methodology: Elementary	3sh
AE318	Art Education Methodology: Secondary	3sh
Art History required:		9
AH205	Ancient to Medieval Art	3sh
AH206	Renaissance to Baroque Art	3sh(1)
AH211	Modern Art	3sh(2)
AH413	Senior Seminar	3sh
Controlled electives:		12

Additional courses from lists: (3)
- Advanced Studio: AR421, AR451, AR452, AR453, AR454, AR455, AR457, AR459, AR460
- Advanced Art History: AH219, AH222, AH406, AH408, AH409, AH412, AH416, AH424, AH426
- Art Education elective: AE330

Free Electives: 0

(#) Total Degree Requirements: 134-136

( ) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Credits counted under Liberal Studies electives.
(2) AH222: Art in America may be substituted for AH211.
(3) Courses can only be taken following successful completion of the foundation prerequisite course.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

Department of Music

Calvin E. Weber, Chairperson; Adams, Bird, Borst, Casavant, Chepaitis, Dearing, Dickinson, Dietz, Fry, Godt, Intili, Johnson, Kauffman, Kuehn, Lloyd, Luchsinger, Mantel, Olmstead, Perlongo, Sartori, Seandrett, Stamp, Staples, Teti, Thorell, VanSteenkist, Vouklizas, Wheatley, Wilson; and professors emeriti Becker, Davis, DiCicco, Malitsky, Perkins, Stitt, Wildeboor

The Department of Music has a three-fold mission: (1) professional preparation of music educators and performers, (2) liberal studies for the university, and (3) programs of music for the community. Degrees offered include the Bachelor of Arts, Bachelor of Fine Arts, and Bachelor of Science in Education.

Admission to the Music Department requires satisfactory completion of an audition in addition to the university general requirements. Detailed information will be sent to the applicant upon request.

A student wishing to minor in music must elect a minimum of fifteen semester hours in music courses as approved by the department chairperson. The program leading to the Bachelor of Arts in music has been designed to give the student a general experience in music. The student seeking this degree has the choice of four tracks: Music History/Literature, Music Theory/Composition, Performance, or Jazz Studies.

The program leading to the Bachelor of Fine Arts in Music (equivalent to the Bachelor of Music Degree) is a special program with a major in one of twenty-one areas of performance. The student in this program prepares to pursue a career as a professional performing musician.

The program leading to the Bachelor of Science in Education with a music major leads to certification to teach in the schools of Pennsylvania.

Special Requirements

1. Each student must declare a primary performing medium. Those who elect voice as their primary instrument normally elect piano as a secondary instrument, those who elect piano as their primary instrument normally elect voice as their secondary instrument. Performance juries are held at the end of each semester. Students are expected to complete the requirements for their performing area and level. Piano proficiency is required in all degree programs.

2. Ensemble participation of 5 hours a week is required each semester. Students may fulfill this departmental requirement by participation in either one-credit or zero-credit ensemble(s). In meeting the degree requirements of 7-8 semester hours of ensemble credit, enrollment in credit-bearing ensembles is flexible across semesters.

3. Students must register for MU475 (Music Lab) and attend (1) all department and area recitals and (2) eight campus recitals and concerts each semester.

Bachelor of Arts—Music/History and Literature Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55
- Mathematics: MA101 recommended
- Fine Arts: MH101
- Liberal Studies electives: HI305, no courses with MH prefix

Major:		41
Required courses:		
MU111	Theory Skills I	2sh
MU112	Theory Skills II	2sh
MU115	Theory I	3sh
MU116	Theory II	3sh
MU211	Theory Skills III	2sh
MU212	Theory Skills IV	2sh
MU215	Theory III	3sh
MU216	Theory IV	3sh
MH301	Music History I	3sh
MH302	Music History II	3sh
Controlled electives:		15sh
Five courses from this list: MH320, 321, 322, 323, 324, 325, 326, 420, 421		
Other Requirements:		15
Music Ensembles (MU120-136)		8sh
Music Electives		7sh
Jury Clearance in piano C		0sh
Attendance at 8 recitals per semester (MU475, S grade, 8 semesters)		0sh

Free Electives: 13-15

Total Degree Requirements: 124

Bachelor of Arts—Music/Jazz Studies Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55
- Mathematics: MA101 recommended
- Fine Arts: MH101
- Liberal Studies electives: HI305, MH103, no courses with MU prefix

Major:		56
Required courses:		
MU111	Theory Skills I	2sh
MU112	Theory Skills II	2sh
MU115	Theory I	3sh
MU116	Theory II	3sh
MU213	Jazz Theory Skills I	2sh
MU214	Jazz Theory Skills II	2sh
MU222	Jazz Theory I	3sh

MU223 Jazz Theory II 3sh
MU224 Jazz Improvisation I 3sh
MU225 Jazz Improvisation II 3sh
MU311 Fundamentals of Conducting 2sh
MU318 Jazz Orchestration I 3sh
MU319 Jazz Orchestration II 3sh
Controlled electives
Applied Music I thru VIII 16sh
Private lessons in performance area-2sh each of eight semesters
Major related
MH301 Music History I 3sh(1)
MH302 Music History II 3sh(1)

Other Requirements: 8
MU135 Jazz Ensemble –8 semesters 8sh
Jury Clearance in major instrument, minor instrument (if any), and piano C 0sh
Attendance at 8 recitals per semester (MU475, S grade, 8 semesters) 0sh

Free Electives: 5-7

Total Degree Requirements: 124

(1) MH201-202 Jazz History I-II may be substituted

Bachelor of Arts—Music/Music Performance Track

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications
Mathematics: MA101 recommended
Fine Arts: MH101
Liberal Studies electives: HI305, MH301, no courses with MU prefix

Major: 42
Required courses
MU111 Theory Skills I 2sh
MU112 Theory Skills II 2sh
MU115 Theory I 3sh
MU116 Theory II 3sh
MU211 Theory Skills III 2sh
MU212 Theory Skills IV 2sh
MU215 Theory III 3sh
MU216 Theory IV 3sh
Controlled electives:
Applied Music I thru VIII private lessons in performance area—2sh each of eight semesters 16sh
Major related
MH103 Perspectives in Jazz 3sh
MH302 Music History II 3sh

Other Requirements: 14
Music ensembles (MU120-136) 8sh
Music electives, with adviser approval 6sh
Jury clearance in major instrument, minor instrument (if any), and piano (if not major or minor instrument) 0sh
Attendance at 8 recitals per semester (MU475, S grade, 8 semesters) 0sh

Free Electives: 13-15

Total Degree Requirements: 124

Bachelor of Arts—Music/Theory and Composition Track

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Mathematics: MA101 recommended
Fine Arts: MH101
Liberal Studies electives: HI305, MH301, no courses with MU prefix

Major: 54
Required courses:
MU111 Theory Skills I 2sh
MU112 Theory Skills II 2sh
MU115 Theory I 3sh
MU116 Theory II 3sh
MU211 Theory Skills III 2sh
MU212 Theory Skills IV 2sh
MU215 Theory III 3sh
MU216 Theory IV 3sh
MU217 Keyboard Harmony I 1sh
MU218 Keyboard Harmony II 1sh
MU306 Counterpoint I 2sh
MU315 Theory V 3sh
MU411 Composition I 2sh
MU412 Composition II 2sh
MU413 Composition III 2sh
MU414 Composition IV 2sh
Controlled electives:
One from list: MU304, MU307, MU309 2sh
Applied Music I-VII Private lessons in performance area 2sh each of seven semesters 14sh
Major related
MH302 Music History II 3sh

Other Requirements: 8
Music ensembles (MU120-136) 8sh
Jury clearance in major instrument, minor instrument (if any), and piano B 0sh
Attendance at 8 recitals per semester (MU475, S grade, 8 semesters) 0sh

Free Electives: 7-9

Total Degree Requirements: 124

Bachelor of Fine Arts—Music Performance

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Mathematics: MA101 recommended
Fine Arts: MH101
Liberal Studies electives: HI305, MH301, no courses with MU prefix

Major: 55
Required courses:
MU111 Theory Skills I 2sh
MU112 Theory Skills II 2sh
MU115 Theory I 3sh
MU116 Theory II 3sh
MU211 Theory Skills III 2sh
MU212 Theory Skills IV 2sh
MU215 Theory III 3sh
MU216 Theory IV 3sh
Controlled electives:
Applied Music I thru VIII: private lessons in performance area—4sh each of 8 semesters 32sh
Major related.
MH302 Music History II 3sh

Other Requirements: 20
Music ensembles (MU120-136) 8sh
Music electives 12sh(1)
Jury clearance in major instrument, minor instrument (if any), and piano C (unless major or minor) 0sh
Attendance at 8 recitals per semester (MU475, S grade, 8 semesters) 0sh
Junior and Senior Recitals 0sh

Free Electives: 0

(#) Total Degree Requirements: 128-130

(1) Majors with piano or organ performance specialization must elect MU217 and MU218: Keyboard Harmony I and II, 1sh each.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

Bachelor of Science in Education—Music Education (*)

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Mathematics: MA101 recommended
Fine Arts: MH101
Social Science: PC101
Liberal Studies electives: HI305, MH301, no courses with MU prefix

College: 30
Professional Education Sequence:

CM301	Technology for Learning and Instruction	3sh
ED242	Pre-student Teaching I	1sh
ED342	Pre-student Teaching II	1sh
ED421	Student Teaching Elementary Level	6sh
ED441	Student Teaching Secondary Level	6sh
ED442	School Law	1sh
EP202	Educational Psychology	3sh
FL202	American Education in Theory and Practice	3sh
MU331	Elementary Methods	3sh
MU333	Secondary Methods	3sh

Major: 49
Required courses:

MU111	Theory Skills I	2sh
MU112	Theory Skills II	2sh
MU115	Theory I	3sh
MU116	Theory II	3sh
MU211	Theory Skills III	2sh
MU212	Theory Skills IV	2sh
MU215	Theory III	3sh
MU216	Theory IV	3sh
MU151-152	Class Voice I and II	2sh(1)
MU153-154	Class Piano I and II	2sh(2)
MU155	Class Strings I	1sh
MU157	Class Percussion I	1sh
MU159	Class Brass I	1sh
MU161	Class Woodwinds I	1sh
MU311	Fundamentals of Conducting	2sh

Controlled electives:

One from list: MU312 or MU313		2sh
Applied Music I thru VII: private lesson in performance area—2sh each of seven semesters		14sh

Major related:

MH302	Music History II	3sh

Other Requirements: 7

Music Ensembles (MU120-136)	7sh
Jury clearance in major instrument, minor instrument (if any) and piano C (unless major or minor)	0sh
Attendance at 8 recitals per semester (MU475, S grade, 7 semesters)	0sh

Free Electives: 0

(#) Total Degree Requirements: 139-141

( ) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) For majors with voice as performance specialization, any three of the following may be substituted: MU351, 353, 354, 406
(2) Private piano I and II (AM101,151) may be substituted
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

Department of Theater

Annie-Laurie Wheat, Chairperson; Ault, Blackledge, Bowes, Eisen, Lommock, McCreary, Simpson; and professor emeritus Ensley

The Department of Theater has as its mission to provide for students of the university the opportunity for the study of theater arts as a part of a liberal and humanistic education. To fulfill this mission the department offers courses in the history and theory of drama, performance, and technical theater/design at both introductory and advanced levels.

The department offers production opportunities as a practical extension of the academic program during the regular academic year and summers and through off-campus internships with professional theater companies.

The Theater Department is developing its offerings in the area of dance. With the addition of faculty, the department anticipates courses in dance to support the theater offerings and to provide opportunities for students to explore dance within the liberal studies fine arts courses.

The Theater Department offers a Bachelor of Arts degree, a Bachelor of Fine Arts degree, and a minor in theater. Students may include theater courses as an option in the General Fine Arts degree offered through the College of Fine Arts. The Bachelor of Arts in Theater provides for the study of theater within a broad liberal education. The Bachelor of Fine Arts in Theater provides intensive study in theater arts leading to post baccalaureate professional training or entry-level employment. Though all freshman theater majors matriculate into the B.A. program, students may apply for admission to the B.F.A. program in their fourth semester and will be expected to provide portfolio or audition. A minor in theater consists of 15 semester hours and courses approved by the chairperson of the Department of Theater.

Bachelor of Arts—Theater

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Fine Arts: AH101 or MH101
Liberal Studies electives: no courses with TH prefix

Major: 36
Required courses:

TH110	Script Analysis	3sh
TH115	Principles of Theatre Design and Architecture	3sh
TH201	Theatre History I	3sh
TH202	Theatre History II	3sh
TH301/302	Tragic Mask or Comic Mask	3sh
TH310	Theatre Criticism	3sh

Any three of the following:

TH120	Stagecraft I	3sh
TH122	Costume Workshop	3sh
TH221	Basic Lighting	3sh
TH223	Makeup	3sh

Any three of the following:

TH130	Stage Voice I	3sh
TH131	Stage Movement I	3sh
TH240	Acting I	3sh
TH350	Directing	3sh

Other Requirements: 4

TH486	Practicum for Production (minimum of 6 semesters)	4sh

Free Electives: 29-31

Total Degree Requirements: 124

Bachelor of Fine Arts—Theater Arts

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Fine Arts: AH101 or MH101
Liberal Studies electives: no courses with TH prefix

Major: 36

Required courses.

TH110	Script Analysis	3sh
TH115	Principles of Theatre Design and Architecture	3sh
TH201	Theatre History I	3sh
TH202	Theatre History II	3sh
TH301/302	Tragic Mask or Comic Mask	3sh
TH310	Theatre Criticism	3sh

Choose any three of the following:

TH120	Stagecraft I	3sh
TH122	Costume Workshop	3sh
TH221	Basic Lighting	3sh
TH223	Makeup	3sh

Choose any three of the following

TH130	Stage Voice I	3sh
TH131	Stage Movement I	3sh
TH240	Acting I	3sh
TH350	Directing	3sh

Other Requirements: 27

BFA required courses. Choose one from each group

A.	TH220, 320, 321, 322	3sh
B.	TH330, 331, 340	3sh
C.	TH301, 302	3sh

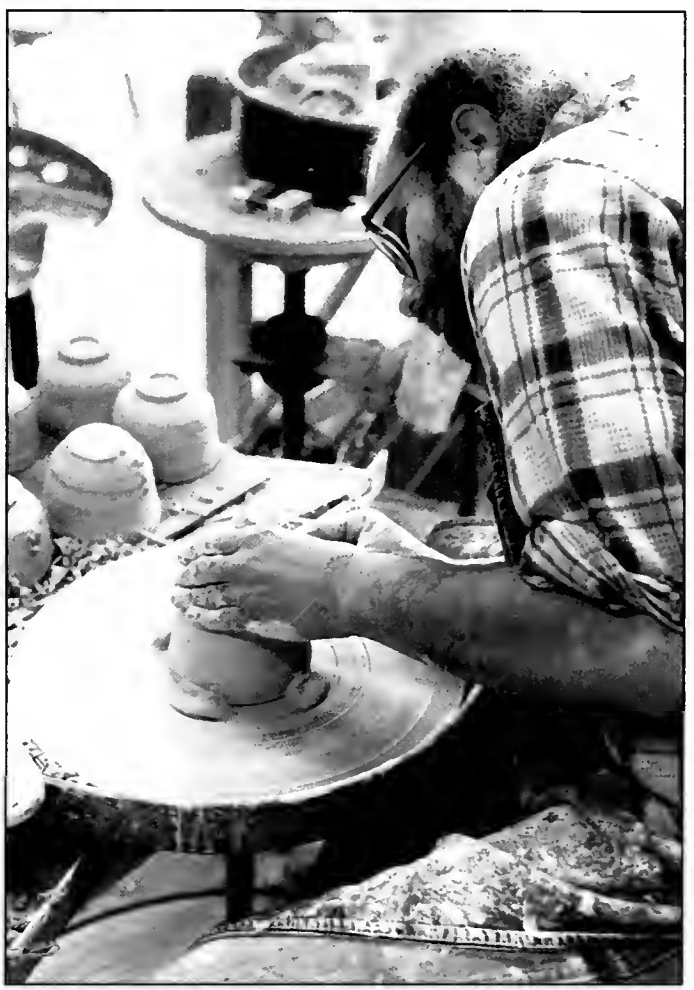
Additional requirements:

TH486	(Minimum of 6 semesters at .5 to 1sh each)	6sh
TH399	Internship	0-6sh
Controlled electives		6-12sh

From list: TH120, 122, 130, 131, 220, 221, 223, 240, 320, 321, 322, 330, 331, 350, 481, 482, 483, 484, 489

Free Electives: 6-8

Total Degree Requirements: 124



The College of Health and Human Services

Hal E. Wingard, Dean
Carleen C. Zoni, Associate Dean

The College of Health and Human Services, previously known as the College of Human Ecology and Health Sciences, is composed of six academic departments: Food and Nutrition, Health and Physical Education, Hotel, Restaurant, and Institutional Management, Human Development and Environmental Studies, Nursing and Allied Health Professions, and Safety Sciences. Each department provides theoretical, laboratory, and practical experiences for students and prepares them for selected careers.

Faculty members of the college hold advanced academic degrees in their area of expertise. They have extensive experience as teachers and advisers and have had experience working in a variety of career fields.

Students can study in the following academic areas: Child Development/Family Relations, Community Services, Consumer Affairs, Dietetics, Fashion Merchandising, Food and Nutrition Science, Food Service Management, Health and Physical Education, Home Economics Education, Interior Design/Housing, Medical Technology, Nursing, Physical Education and Sport Science, Respiratory Care, and Safety Sciences.

College goals are designed to emphasize the areas of human development and family relations; positive health in growth and development through nutritional, physical, and emotional fitness; prevention of illness; restoration of optimal health after illness; occupational safety and health; teacher education; consumerism; commercial and residential design; merchandising and buying of apparel and home furnishings; and management within the hospitality industry.

Courses in natural sciences are required of all academic majors, and students are encouraged to become involved in research activities and computer utilization.

The college offers a variety of opportunities to extend the students' educational experience through honorary and service organizations; field organizations, and sports and recreational activities.

Department of Consumer Services

The Department of Consumer Services and the Department of Home Economics Education have merged to form the Department of Human Development and Environmental Studies.

See Department of Human Development and Environmental Studies.

Department of Food and Nutrition

Joanne B. Steiner, Chairperson; Cessna, Dahlheimer, Johnson, Moore-Armitage; and professor emerita Minnick

The Food and Nutrition Department offers degree programs in dietetics, food and nutrition science, and nutrition education. These curriculums prepare students as professionals for a diversity of career opportunities in health care, food service, the food industry, and food and nutrition research.

In addition, the department provides Liberal Studies courses which are available to all university students. These include FN 140/141 (or 143, when approved) Nutrition and Wellness, an option in the university's Liberal Studies requirements for Health and Wellness; FN 145: Introduction to Nutrition, a Liberal Studies elective; and LS499: Human Food Consumption Patterns, a synthesis course.

Dietetics

The dietetics program meets the didactic academic requirements approved by the American Dietetic Association. Students are prepared for careers in clinical dietetics, dietary food service management in health care facilities, administrative dietetics, and community nutrition. Other exciting career opportunities exist in the areas of technical sales, consumer education, government agencies, health and fitness centers, corporate wellness, and private practice.

Food and Nutrition Science

Food and Nutrition Science provides a student with a background in the basic sciences that gives a solid foundation for theoretical and applied food science and nutrition. Emphasis is placed on laboratory work in nutrition and food composition. The program meets the needs of students motivated in the biological-physical sciences who wish, with graduate education, to enter careers in food/nutrition research, nutrition service professions, medical science, and education.

Nutrition Minor

This minor sequence is recommended for students majoring in the related health disciplines such as child development, home economics education, nursing and allied health, and health and physical education. Students electing a minor in nutrition must complete 16 credit hours of coursework from the courses listed below. Students must note that the completion of this minor neither meets the requirements for practice as a credentialed nutritionist nor satisfies the academic requirements of the American Dietetic Association for a registered dietitian. For additional information about these careers, contact the Food and Nutrition Department.

Bachelor of Science—Dietetics

Liberal Studies: As outlined in Liberal Studies section 54-55
with the following specifications:
- Mathematics, MA217
- Natural Science: CH101-102
- Social Science: EC101, PC101, SO151
- Liberal Studies electives: BE/CO/IM101; HE 218 or PC 310, no courses with FN prefix

Major: 39
Required courses:

FN110	Careers in Food and Nutrition	1sh
FN150	Foods Lecture	3sh
FN151	Foods Labratory	1sh
FN212	Nutrition	3sh
FN213	Life Cycle Nutrition	3sh
FN355	Nutrition in Disease I	3sh
FN362	Experimental Foods	3sh
FN364	Methods of Teaching	3sh
FN402	Community Nutrition	3sh
FN430	Professional Topics in Food and Nutrition	3sh
FN455	Nutrition in Disease II	3sh
FN458	Advanced Human Nutrition	3sh
FN463	Nutrition Counseling	3sh
FN470	Human Food Consumption Patterns	3sh
FN484	Senior Seminar	1sh

Other Requirements:
Food Service Requirements: 13

HR259	Hospitality Purchasing	3sh
HR313	Food Systems I	4sh
HR356	Human Resources in Hospitality Management	3sh
HR408	Institutions Management	3sh

Additional Sciences: 14

BI105	Cell Biology	4sh
BI155	Human Physiology and Anatomy	4sh
BI232	Fundamentals of Microbiology	3sh
CH255	Biochemistry and Nutrition	3sh

Free Electives (minimum): 4

Total Degree Requirements: 124

Bachelor of Science—Food and Nutrition Science

Liberal Studies: As outlined in Liberal Studies section 55-56
with the following specifications:
Mathematics: MA121
Natural Science CH111-112
Social Science: EC101, PC101, SO151
Liberal Studies electives: MA217, no courses with FN prefix

College: 6
Human Ecology requirements:

One course from list: HE218 or HE224		3sh
One course from list: CS213, CS315, or CS101		3sh

Major: 32
Required courses:

FN150	Foods	3sh
FN151	Foods Lab	1sh
FN212	Nutrition	3sh
FN362	Experimental Foods	3sh
FN458	Advanced Human Nutrition	3sh
FN462	Advanced Experimental Foods	3sh
FN464	Food and Nutrition Research Methods	3sh
FN470	Human Food Consumption Patterns	3sh
FN484	Senior Seminar	1sh

Controlled electives:
Three courses from list: 9sh
FN213, FN355(1), FN444, FN447, FN455(1), FN482

Other Requirements: 22
Science sequence:

BI150	Human Anatomy	3sh(2)
BI151	Human Physiology	4sh(2)
BI232	Fundamentals of Microbiology	3sh(2)
CH231	Organic Chemistry I	4sh
CH351	Biochemistry	4sh
PY111	Physics I Lecture	3sh
PY121	Physics I Lab	1sh

Free Electives: (3) 8-9

Total Degree Requirements: 124

(1) FN355 and FN455 must be completed as a sequence, if elected
(2) Alternate Biology sequence recommended for graduate study preparation BI105, BI151, BI361.
(3) To meet American Dietetic Association requirements, FN355, FN364, FN402, FN455, HR259, HR313, HR356, HR358 (22sh total)

Nutrition Minor

FN212	Nutrition	3sh
FN213	Life Cycle Nutrition	3sh
FN245	Sports Nutrition	1sh
FN355	Nutrition in Disease I	3sh
FN470	Human Food Consumption Patterns	3sh
FN357	Special Problems in Food or	3sh
FN410	Nutrition in Aging	3sh

Department of Health and Physical Education

James G. Mill, Chairperson; Beck, Black, Blacksmith, Blair, Celtnieks, Clark, Cortazzo, Davis, Dickie, Eltz, Grove, Hornfeck, Johnson, Klingaman, Lisciński, Lommock, Montgomery, Moore, Neal, Sledzik, Sloniger, Sutton, Thompson

The Department of Health and Physical Education provides the following services:
(1) instruction in health and wellness courses as part of the university's Liberal Studies requirement
(2) instruction in health and physical education courses as part of the university's general education requirements and activity course electives
(3) an undergraduate major in health and physical education that leads to the Bachelor of Science Degree in Education with potential certification to teach in the Commonwealth of Pennsylvania
(4) Bachelor of Science degree in Physical Education and Sport
(5) Endorsement program in Driver Education—Safe Living

Required Program—Liberal Studies

The Department of Health and Physical Education through its Health and Wellness course in the Liberal Studies program seeks to enhance the overall well-being of students through instruction planned to promote and maintain desirable levels of physical, mental, emotional, and social well-being. Self-responsibility in the following dimensions of wellness is emphasized: nutritional awareness, stress awareness and management, exercise and fitness, substance use and abuse, and sexually transmitted diseases/AIDS. The importance of reducing risk factors for chronic degenerative disease and managing lifestyle factors for promotion of health is presented with implication for both the present and future. Information is provided during class lectures and enhanced by a variety of practical learning experiences which give students opportunities for self-assessment and personal application of the subject matter.

In addition, the department offers a variety of one-credit activity courses focusing on physical fitness and the development of skills essential for recreation and lifetime sports. Instruction is offered in many activities including aerobic dance, archery, backpacking, badminton, bowling, canoeing, contemporary modern dance, downhill skiing, fencing, golf, resistive exercise, rock climbing, scuba, swimming, tennis, volleyball, and others.

The university's Liberal Studies requirements, in effect since fall, 1989, require that each student successfully complete HP143: Health and Wellness or its alternate, FN143: Nutrition and Wellness. Students may also elect to take four semester hours of the ROTC program (MS101-102) as an alternate to the wellness courses. Activity courses will continue to be offered, although they are no longer required. It is encouraged and recommended that students choose these courses as elective credits.

Bachelor of Science Degree (Physical Education and Sport)

The Bachelor of Science Degree in Physical Education and Sport provides greater emphasis on subject matter/content and less on pedagogy. Students who select this emphasis area generally apply their knowledge in fields of

exercise science, community and corporate fitness, cardiac rehabilitation, pre-physical therapy, and/or executive fitness programming. Requirements for the degree in Physical Education and Sport include: 1) the university's Liberal Studies requirements; 2) 31 credit hours in the HPE Core; and 3) 19 credits from the Physical Education and Sport requirements.

In addition, the Department of Health and Physical Education has developed two programs approved by the National YMCA Physical Education Office to provide for the professional preparation of YMCA aquatic directors and physical directors. Both programs emphasize high standards and are vitally concerned with the major objectives of YMCA physical education. Specialized "Y" courses are offered through the IUP Aquatic School, the annual Middle Atlantic Region Aquatic Institute held at IUP each spring, and through other special YMCA programs conducted on the IUP campus and sponsored in cooperation with the Middle Atlantic Region Physical Education Program.

Bachelor of Science in Education (Health and Physical Education)

Requirements for the degree of Bachelor of Science in Education with a major in Health and Physical Education include the university's Liberal Studies requirements, Professional Education requirements, and the Health and Physical Education core requirement. Upon completion of the degree program and successfully passing the National Teachers Exam, the student is qualified for an Instructional I Certificate in Health and Physical Education, issued by the Pennsylvania Department of Education in Harrisburg. This certificate is valid for teaching health and physical education in grades K through 12 for three years in the public schools of Pennsylvania. Major students may utilize free electives to specialize in the areas of aquatics or dance.

Health and Physical Education Core

The Health and Physical Education curriculum identifies a required core of studies which emphasizes a body of knowledge relevant to the study of professional health and physical education, as well as the study of physical education and sport. Courses contained in the core are those which are intended to teach students to identify and solve problems by applying relevant knowledge and also to engage in self-directed learning.

Candidates for the degree program in Health and Physical Education must demonstrate acceptable cognitive and psychomotor qualifications as well as desirable character and personality traits. The professional program seeks to foster those qualities of individual character and competence that are inherent in personal and professional maturity. These competencies are evaluated at the end of the sophomore year. The student is either granted Advanced Standing in the department or restricted in scheduling advanced courses for not less than one probationary semester. Continuation in the major program is based upon attainment of department Advanced Standing.

Driver Education—Safe Living 7-12

Candidates for the driver education certification must possess, or be a candidate for, a valid Pennsylvania certificate in any area of certification. A student must currently complete the four courses HP251, HP252, HP353, and HP354. Students must request the certificate in driver education-safe living 7-12 when they apply for graduation. For students who have already graduated, contact the office of the dean, College of Education, for correct procedure.

Aquatics School Course Offerings

Each summer the department offers the annual Aquatics School for eight consecutive days. Students must be seventeen years of age or older and possess the necessary aquatic prerequisites. A fee will be charged which will include room, three meals a day, use of equipment, accident insurance, transportation to and from the lake, and special one-night programs. Certification will be granted by the American Red Cross, National YMCA, Professional Association of Diving Instructors, and the American Heart Association upon completion of courses. All courses may be taken for college credit, if the student is eligible and pays the additional tuition fee. For more information, contact the aquatic director. Courses offered exclusively as a part of the Aquatics School are HP267, HP268, HP269, HP270, HP271, HP272, HP273, HP274, HP276, HP277, HP279, and HP280. Courses offered during the academic year as well as in summer school include HP242, HP261, HP265, and HP266.

Bachelor of Science—Physical Education and Sport

Liberal Studies: As outlined in Liberal Studies section 54
with the following exceptions:
Mathematics: MA101 or MA110 or MA217
Health and Wellness: EN143 or MS101-102
Natural Science: CH101-102
Social Science: PC101, SO151
Liberal Studies Electives: EN145, CO/BE/IM 101, no courses with HP prefix

Major

Core Requirements			31
HP142	Foundations of Health and Physical Education	3sh	
HP200	Fundamentals of Physical Activity	1sh	
HP210	Motor Development	2sh	
HP221	Human Structure and Function	3sh	
HP246	Biomechanics	3sh	
HP251	Foundations of Safety and Emergency Health Care	3sh	
HP263	Aquatics	1sh	
HP341	Evaluation in Health and Physical Education	3sh	
HP343	Physiology of Exercise	3sh	
HP344	Adapted Physical Education	3sh	
HP441	Psychosocial Implications for Health and Physical Education	3sh	
HP442	Seminar in Health and Physical Education	3sh	
Professional Requirements:			19
HP319	Preprofessional Experience II	1sh	
HP345	Athletic Training I	3sh	
HP346	Athletic Training Lab I	1sh	
HP375	Physiological Basis of Strength	3sh	
HP410	Exercise Prescription	3sh	
HP411	Physical Fitness/Appraisal Guidance	3sh	
HP412	Physical Activity and Stress Management	3sh	
Controlled Electives: (1)			6-12
HP408	Guided Research	2sh	
HP413	Physical Activity and Aging	3sh	
HP246	Health Science Instruction	3sh	
HP482	Independent Study	3sh	
HP493	Internship	6-12sh	
BI151	Human Physiology	4sh	
BI155	Human Physiology and Anatomy	4sh	
Nutrition Minor Acceptable as Controlled Elective:			18
CH255	Biochemistry and Nutrition	3sh	
FN212	Nutrition	3sh	
FN355	Nutrition in Disease I	3sh	
FN455	Nutrition in Disease II	3sh	
FN458	Advanced Human Nutrition	3sh	
FN463	Nutrition Counseling	3sh	

Other Requirements: 0

Free Electives: 7-14

Total Degree Requirements: 124

(1) Nutrition minor may substitute for Controlled Electives.

Bachelor of Science in Education—Health and Physical Education (*)

Liberal Studies: As outlined in Liberal Studies section 54
with the following exceptions:
Mathematics: MA101 or MA110 or MA217
Health and Wellness: EN143, MS101-102
Natural Science: BI103-104
Social Science: PC101, SO151
Liberal Studies electives: EN145, PC378, or approved alternatives

Major:

Course Requirements:			31
HP142	Foundations of Health and Physical Education	3sh	
HP200	Fundamentals of Physical Activity	1sh	
HP210	Motor Development	2sh	
HP221	Human Structure and Function	3sh	
HP246	Biomechanics	3sh	
HP251	Foundations of Safety and Emergency Health Care	3sh	

HP263	Aquatics	1sh	
HP341	Evaluation in Health and Physical Education	3sh	
HP343	Physiology of Exercise	3sh	
HP344	Adapted Physical Education	3sh	
HP441	Psychosocial Implications for Health and Physical Education	3sh	
HP442	Seminar in Health and Physical Education	3sh	
Professional Requirements Health and Physical Education:			22
HP211	Dance, Rhythmic Activities, and Gymnastics	3sh	
HP212	Team Sports	3sh	
HP213	Individual, Dual Sports, and Adventure Activities	3sh	
HP318	Preprofessional Experience I	1sh	
HP321	Methods for Elementary Health and Physical Education	3sh	
HP325	School and Community Health	3sh	
HP426	Health Science Instruction	3sh	
HP450	Curriculum in Human Sexuality	3sh	
Professional Education Requirements			24
CM301	Technology for Learning and Instruction	3sh	
ED242	Pre-student Teaching I	1sh	
ED342	Pre-student Teaching II	1sh	
ED421	Student Teaching	6sh	
ED441	Student Teaching	6sh	
ED442	School Law	1sh	
EP202	Educational Psychology	3sh	
FE202	American Education in Theory and Practice	3sh	

Other Requirements: 0

Free Electives: 0

(#) **Total Degree Requirements:** 131

( ) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."

(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation

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Certification—Driver Education-Safe Living

Certification in Driver Education-Safe Living may be added to a valid Pennsylvania Instructional Certificate with the completion of the following courses:

HP251	Accident Causation and Prevention	3sh
HP252	Introduction to the Driving Task	3sh
HP353	Driving Education Program Management	3sh
HP354	Application of Driver Ed. Instructional Modes	3sh

Department of Home Economics Education

The Department of Home Economics Education and the Department of Consumer Services have merged to form the Department of Human Development and Environmental Studies.

See Department of Human Development and Environmental Studies.

Department of Hotel, Restaurant, and Institutional Management

Thomas Van Dyke, Chairperson; Baker, Caulfiel, Gressley, Marshall, Miller; and professor emeritus Woods

The department offers students an academic preparation leading to a Bachelor of Science Degree in Hotel, Restaurant, and Institutional Management. Students take general courses in business, chemistry, biology, computer, and foreign language. They then elect to concentrate in either food service management or lodging management.

The food service management track prepares men and women for management positions in restaurants, corporate food services, entertainment or recreation food service, health care, or other institutional and contract food service.

The lodging management track prepares women and men for management positions within hotels, resorts, and other lodging operations. Emphasis is on the study of housekeeping, rooms, and sales departments but also includes food production and service.

Both programs require the student to complete 880 hours of hospitality industry work experience before graduation. The first 440 hours are completed during the freshman and sophomore years in any type of hospitality position selected by the student and must be completed before the internship is scheduled. The second 440 hours are completed during an internship. The internship is supervised by a faculty member who assists the student in developing the learning package to be achieved during the internship and who advises the intern on university, department, and site requirements.

Professional-type uniforms are prescribed as part of the dress code for departmental majors in all food production classes.

Bachelor of Science—Hotel, Restaurant, and Institutional Management

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 54-55

Mathematics: MA217
Natural Science: CH101-102
Social Science: EC121, PC101
Liberal Studies electives: CO/IM/BL101, EN145, no course with an HR prefix

Major:

Required courses:			33
HR101	Introduction to Hospitality	3sh	
EN150	Foods	3sh	
EN151	Foods Lab	1sh	
HR259	Hospitality Purchasing	3sh	
HR313	Food Systems I	4sh	
HR356	Human Resources in the Hospitality Industry	3sh	
HR401	Cost Management	3sh	
HR411	Seminar in Hospitality Management	3sh	
HR413	Food Systems II	3sh	
HR493	Internship	6sh(1)	
Controlled electives: One Track required			12-15
Food Service Management Track:			
EN145	Introduction to Nutrition	3sh(2)	
HR306	Food and Beverage Management	3sh	
HR358	Food Service Equipment and Facilities Design	3sh	
HR406	Catering and Banquet Management	3sh	
HR408	Institutions Management	3sh	
Lodging Management Track:			
HR115	Introduction to Tourism	3sh	
HR360	Hotel Systems Management	3sh	
HR365	Hotel Design and Maintenance	3sh	
HR420	Hotel Sales and Services	3sh	
IM300	Information Systems: Theory and Practice	3sh	

Other Requirements: 15-21

AG201	Accounting Principles I	3sh
BI232	Fundamentals of Microbiology	3sh
BL235	Introduction to Business Law	3sh
MK320	Principles of Marketing	3sh
FL—	Foreign Languages	3-9sh(3)

Free Electives: 0-11

Total Degree Requirements: 124

(1) Each student must complete 880 hours of work experience, of which 440 hours must be through supervised experiences in HR493. See department internship coordinator for detailed information.

(2) Credit counted in Liberal Studies electives.
(3) Each student must have foreign language proficiency of either:
A. Intermediate-level - SP201/FR202/GM252 OR
B. Successful completion of two semesters of one language. Intermediate-level courses may be used as Liberal Studies elective.

Department of Human Development and Environmental Studies

Donna L. Streifthau, Chairperson; Bell, Gordon, Groves, Harley, Heckroth, Kesner, Lynn, Nelson, Schmitt, Swinker, Viggiano, Wernsman; and professors emeritae Cramer, Gallati, Hovis, Kazmer, Wood

The Department of Human Development and Environmental Studies was created by the merging of the Home Economics Education and Consumer Services departments. The mission statement of the Department of Human Development and Environmental Studies is to empower individuals to support human and environmental needs, enabling them to perform professionally in a changing, diverse technological and global society.

The department is composed of majors that are interdisciplinary and share humanistic values. All majors have an applied research focus and stress critical thinking, professional judgment, decision making, and synthesis of information.

The Human Development and Environmental Studies Department offers academic programs leading to the Bachelor of Science degree in the following majors: Child Development/Family Relations, Consumer Affairs, Fashion Merchandising, and Interior Design/Housing. The Home Economics Education program leads to a Bachelor of Science in Education. All majors have an applied research focus and stress critical thinking, professional judgment, decision making, and synthesis of information. These majors prepare men and women for positions in business, the community, and education. The majors also prepare students for graduate study in the areas of interior design, housing, clothing, textiles, consumer economics, community service, child development, family studies or education.

Faculty advisers work closely with students in planning and integrating the academic program to meet the students' career goals and to supplement classroom experiences. Internships are available and encouraged so students can apply academic knowledge to actual situations. International study is also available to provide an enriching cultural experience.

Consumer Affairs

The Consumer Affairs major prepares individuals for professional positions in government, business, and the community. This option concentrates on consumer economic behavior and consumer protection and their relationship to the fair exchange and consumption of products and services. The increased interest in consumer concerns has resulted in creating and expanding positions for persons with an understanding of consumer needs, business operations, and regulatory agencies. The interdisciplinary approach provides the necessary knowledge and skills to fulfill the requirements of such positions.

Community Services Track

Students can elect a community services track which offers a broad selection of courses. Electives may be concentrated in specific areas. A concentration of courses is elected in an outside field study such as sociology or psychology. Graduates may be employed by the Extension Services or by governmental and social agencies.

Fashion Merchandising

The Fashion Merchandising program provides course emphasis in apparel production and distribution, textiles, apparel merchandising and promotion, ready-to-wear analysis, quality control, historical costume, aesthetics, color theory, and apparel construction. The College of Business complements the Fashion Merchandising major by providing study in areas such as accounting, marketing, consumer behavior, advertising, and international marketing.

A cooperative program between IUP and the Fashion Institute of Technology in New York City allows students to study fashion-accessories design, manufacturing management, advertising design, advertising and communication, textiles/surface design, and textile development and marketing. Potential careers include store operations managers, buyers, manufacturer's sales representatives, retail sales coordinators, merchandise managers, fashion coordinators, sales promoters, personnel managers, visual merchandisers, mall promotions managers, quality control analysts, production assistants, color consultants, and personalized shopping specialists.

Interior Design/Housing

The Interior Design program develops creative individuals who are able to conceive, propose, and implement design solutions supportive of the needs of people and the environment. Emphasis is placed on research, synthesis of information, and creative problem solving. Space planning, design graphics, lighting, color theory, historical and modern interiors, housing, and textiles form the core of the program. Students develop an understanding of the Americans With Disabilities Act (ADA) and its relationship to barrier-free design and a sensitivity to global environmental issues. Students tour a variety of settings including offices, museums, factories, showrooms, retail outlets, construction sites, and other design-related facilities. Supportive courses are available in art and business. Potential careers include commercial and residential design, housing, sales, historical preservation, and showroom management.

Bachelor of Science—Consumer Affairs

Liberal Studies: As outlined in Liberal Studies section 54-55
with the following specifications:
Mathematics: MA101 or higher
Natural Science: CH101-102
Social Science: EC101, PC101, SO151
Liberal Studies electives: no courses with CS prefix

Major: 42
Required courses:

CS101	Personal and Family Management	3sh
CS121	Introduction to Consumer Services	1sh
CS213	Residential Appliances and Consumer Electronics	3sh
CS216	Clothing and Culture	3sh
CS303	Visual Merchandising	3sh
CS312	Housing and Culture	3sh
CS314	Textiles	3sh
CS315	Consumer Economics and Family Finance	3sh
CS413	Problems in Consumer Economics	3sh
CS421	Senior Seminar	2sh
CS416	Problems in Family Finance	3sh
FN212	Nutrition	3sh
JN120	Journalistic Writing	3sh

Controlled electives:
Three courses from list: CS112, CS212, CS217, CS303, CS318, CS354, CS433, CS461, FN211, FN212, FN259, FN313, FN358, FN362 6sh(1)

Other Requirements: 18
Outside concentration:
Required:

BL235	Introduction to Business Law	3sh
BL336	Law of Business Organizations	3sh
BL337	Consumer Law	3sh

Controlled electives: Three courses from list:
AD321, MG300, MK320, MK321, MK433 9sh(1)

Free Electives: 9-10

Total Degree Requirements: 124

(1) Substitutions may be approved by department.

Bachelor of Science—Consumer Services/Community Services Track

Liberal Studies: As outlined in Liberal Studies section 54-55
with the following specifications:
Mathematics: MA101 or higher
Natural Science: CH101-102
Social Science: EC101, PC101, SO151
Liberal Studies electives: no course with CS prefix

Major: 32
Required courses:
- AR120 Principles of Design 2sh
- CS101 Personal and Family Management 3sh
- CS121 Introduction to Consumer Services 1sh
- CS213 Residential Appliances and Consumer Electronics 3sh
- CS216 Clothing and Culture 3sh
- CS312 Housing and Culture 3sh
- CS314 Textiles 3sh
- CS315 Consumer Economics/Family Finance 3sh
- CS421 Senior Seminar 2sh
- FN212 Nutrition 3sh
- HE224 Marriage and Family Relations 3sh

Controlled electives
- One course from list: CS112 or CS212 3sh

Other Requirements: 24
Human Ecology requirements:
- FN150 Foods 3sh
- HE218 Child Development 3sh

Outside concentration: 18sh
- Six courses from list: AN211, AN319, PC374, PC290, PC322, PC310, PC311, PC320, PC321, PC330, PC361, PC373, PC312, SO231, SO332, SO333, SO336, SO339, SO357, SO435, SW238.

Free Electives: 13-14

Total Degree Requirements: 124

Bachelor of Science—Fashion Merchandising

Liberal Studies: As outlined in Liberal Studies section 54-55
with the following specifications:
- Mathematics: MA101 or higher
- Natural Science: CH101-102
- Social Science: PC101, EC101, SO151
- Liberal Studies electives: BE/CO/IM101, no course with CS prefix

Major: 41-42
Required courses:
- CS121 Introduction to Consumer Services 1sh
- CS216 Clothing and Culture 3sh
- CS314 Textiles 3sh
- CS315 Consumer Economics/Family Finance 3sh
- CS350 Apparel Industry I 3sh
- CS421 Senior Seminar 2sh
- CS450 Apparel Industry II 3sh
- CS456 Historic Costume 3sh
- JN120 Journalistic Writing 3sh

Controlled electives:
- One course from CS112 or CS212 3sh
- Courses from CS212, CS213, AR113 or 120, CS217, CS303, CS354, CS433, CS453, CS455, CS465, EP303 14-15sh

Other Requirements: 18
Outside concentration:
Required course:
- AG201 Principles of Accounting I 3sh

Controlled electives: 15sh(1)
- Five courses from list: AD101 or MG360, BL235, AD321, BL336, BL337, AG202, AG301, AG302, DE332, DE333, EC122, QB215, IM300, FI310, IM251, MG300, MG410, MK320, MK321, MK420, MK422, MK430, MK433

Free Electives: 9-11

Total Degree Requirements: 124

(1) Substitutions may be approved by department.

Bachelor of Science—Interior Design/Housing

Liberal Studies: As outlined in Liberal Studies section 54-55
with the following specifications
- Mathematics: MA101 or higher
- Fine Arts: AH101
- Natural Science: CH101-102
- Social Science: EC101, PC101, SO151
- Liberal Studies electives: AH205 or AH206, no courses with CS prefix

Major: 41
Required courses:
- CS121 Introduction to Consumer Services 1sh
- CS213 Residential Appliances and Consumer Electronics 3sh
- CS217 Interior Design 3sh
- CS312 Housing and Culture 3sh
- CS314 Textiles 3sh
- CS315 Consumer Economics and Family Finance 3sh
- CS357 Interior Design Studio 3sh
- CS421 Senior Seminar 2sh
- CS465 Interior Lighting 3sh

Controlled electives:
- One course from AR113 or AR120 3-2sh
- Courses from list: CS101, CS303, CS311, CS318, CS354, CS433, CS462, CS463, CS464, CS481 14-15sh

Other Requirements: 18
Outside concentration: Six courses from lists 18sh
- Business: AD101 or MG360, AD321, FI382, AG201, DE331, DE332, DE333, IM300, FS242, MG300, MK320, MK433
- Art: AR100, AR111, AR112, AR211, AR213, AR214, AR215, AR216, AR217, AR218, AR219, AR321, AR451

Free Electives: 10-11

Total Degree Requirements: 124

Home Economics Education

The Home Economics Education major prepares students for the teaching of home economics-related subjects in the public schools. Coursework is required in all areas of home economics, including child development and family relations, consumer economics, clothing, foods, and interior design/housing. Professional education courses are also required. The program is currently being restructured. Questions about enrollment should be addressed to the department chairperson at 357-2336.

Bachelor of Science in Education—Home Economics Education (*)

Liberal Studies: As outlined in Liberal Studies section 54
with the following specifications:
- Natural Science: CH101-102
- Social Science: PC101, SO151
- Liberal Studies electives: CS315, no courses with HE prefix

College: 33
Professional Education Sequence:
- ED242 Pre-student Teaching Clinical Experience I 1sh
- ED342 Pre-student Teaching Clinical Experience II 1sh
- ED431 Student Teaching in Home Economics 6sh
- ED441 Student Teaching 6sh
- ED442 School Law 1sh
- EP202 Educational Psychology 3sh
- EP377 Educational Tests and Measurements 3sh
- FE202 American Education in Theory and Practice 3sh
- HE250 Introduction to Teaching Vocational Home Economics Education 3sh
- HE350 Teaching Family Life Education 3sh
- HE450 Teaching Vocational Home Economics 3sh

Major: 44-45
Required courses:
- CS101 Personal and Family Management 3sh

CS112	Fundamentals of Clothing Construction	3sh
CS217	Interior Design	3sh(1)
CS312	Housing and Culture	3sh
CS314	Textiles	3sh
FN150	Foods	4sh
FN212	Nutrition	3sh
HE218	Child Development	3sh
HE220	Teaching in Child Development Centers	4sh
HE224	Marriage and Family Relations	3sh

Controlled electives

One from list:	CS212, CS453, CS454	3sh
One from list:	CS213 or CS413	3sh
One from list:	HR313 or FN362	3-4sh
One from list:	HE424 or HE463	3sh

Other Requirements (select one): 3-4

BI155	Human Physiology and Anatomy	4sh
BI232	Fundamentals of Microbiology	3sh

Free Electives: 0

(#) **Total Degree Requirements:** 134-136

( ) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.
(1) Prerequisite for CS217 is AR120: Principles of Design (2sh).

Child Development/Family Relations Major

The Child Development/Family Relations program leads to a Bachelor of Science degree. Primary objectives of the program are to prepare professionals to administer and/or work in programs that entail aspects of child development and family relationships; to teach at the adult level, or administer human services agencies at federal, state, or local level. The program also provides preparation for students who want to pursue graduate study in child development or family studies. Students in Child Development/Family Relations may secure certification in Early Childhood Education through an optional program.

Bachelor of Science—Child Development/Family Relations

Liberal Studies: As outlined in Liberal Studies section 54-56
with the following specifications:
Mathematics: MA101 or 110 or 121 or 217
Natural Science: CH101-102
Social Science: AN110, PC101, SO151
Liberal Studies electives: no courses with HE prefix

College: 6

Human Ecology Requirements:

FN212	Nutrition	3sh
CS315	Consumer Economics and Family Finance	3sh

Major: 31-34

Required courses:

HE218	Child Development	3sh
HE220	Teaching in Child Development Centers	4sh
HE224	Marriage and Family Relations	3sh
HE317	Infant Development	3sh
HE426	Techniques of Parent Education	3sh
HE463	Family and the Community	3sh

Controlled electives: (one track)

Track A: Child Development/Family Relations

HE321	Preschool Education (Developmental Programming)	3sh
HE324	Family Dynamics	3sh
HE418	Advanced Child Development	3sh
HE422	Early Childhood Education	3sh
HE424	Family Issues	3sh

Track B: Child Development (by permission only)

HE321	Preschool Education (Developmental Programming)	3sh
HE418	Advanced Childhood Development	3sh
HE420	Practicum	6sh
HE422	Early Childhood Education	3sh

Track C: Family Relations (by permission only)

HE324	Family Dynamics	3sh
HE424	Family Issues	3sh
HE493	Internship	6sh

Other Requirements: 10

Outside courses:

CM301	Technology for Learning and Instruction	3sh
BI155	Human Physiology and Anatomy	4sh
EP202	Educational Psychology	3sh

Free Electives: 18-23

Total Degree Requirements: 124

Department of Nursing and Allied Health Professions

Jodell Knzneski, Chairperson; Allen, Beck, Bellak, Berg, Black, Blair, Cunningham, Edwards, Gerwick, Hartman, Holt, Polansky, Rossiter, Sadler, Settlemyer, Smatlak, Snyder, Szwarc, Thistlethwaite, Twal, Walz, Zuraikat; and professors emeritae Hart, Kresak, Murray

The College of Health and Human Services offers a curriculum leading to the Bachelor of Science Degree in Nursing. Students are admitted to the nursing major as freshmen. Upon completion of the program, the graduate is prepared to write the examination for licensure as a Registered Nurse in Pennsylvania and other states. The program is fully accredited by the National League for Nursing.

The nursing curriculum has as its primary goal the development of competent professional nurses who are liberally educated, clinically competent, and aware of their social responsibilities as members of the health professions. The program is designed to provide a broad background in general education, coupled with the specialized knowledge and skills required for professional nursing. Additionally, the curriculum prepares the nurse to practice within the professional code of nursing ethics, to function effectively as a member of the health care professions, and to utilize scientific principles in planning and implementing health care. The nursing program emphasizes concepts in health promotion and maintenance and restoration of wellness for people of all ages.

The first three semesters are devoted mainly to Liberal Studies and science courses considered essential to the nursing major. The first clinical nursing courses begin in the fourth semester. Clinical experiences in patient care are provided in acute and long-term care facilities as well as community health agencies throughout the last five semesters. Detailed information is available in the department office regarding health screening requirements, professional uniform requirements, liability insurance needs, and transportation requirements. There is an option to complete the program in five years.

Registered Nurse students are enrolled in the basic baccalaureate program in nursing. They will have an upper-division major in Nursing and will fulfill all degree requirements set by the university and the Nursing Department. The Registered Nurse student may be awarded advanced standing, based on prior work completed at an accredited college or university and on exemption tests in nursing at a given point in the curriculum.

Bachelor of Science—Nursing

Liberal Studies: As outlined in Liberal Studies section 55-56
with the following specifications:
Mathematics: MA217(1)
Natural Science: CH101-102
Social Science: PC101, SO151
Liberal Studies electives: PY151/161, PC310, no courses with NU prefix

Major: 53

Required courses:

NU280	Introduction to Nursing	3sh

NU285	Introduction to Clinical	3sh
NU300	Nursing Seminar I	1sh
NU302	Core I	2sh
NU303	Clinical Lab I	5sh
NU304	Core II	2sh
NU305	Clinical Lab II	5sh
NU310	Nursing Seminar II	1sh
NU322	Maintenance and Restoration of Wellness I	3sh
NU323	Maintenance and Restoration of Wellness II	3sh
NU400	Nursing Seminar III	1sh
NU402	Core III	2sh
NU403	Clinical Lab III	5sh
NU404	Core IV	2sh
NU405	Clinical Lab IV	5sh
NU410	Nursing Seminar IV	1sh
NU422	Maintenance and Restoration of Wellness III	3sh
NU423	Maintenance and Restoration of Wellness IV	3sh
NU430	Nursing Research	3sh

Other Requirements: 20

Science sequence:

BI105	Cell Biology	4sh
BI150	Human Anatomy	3sh
BI151	Human Physiology	4sh
BI241	General Microbiology	3sh
FN212	Nutrition	3sh
PC321	Abnormal Psychology	3sh

Free Electives: 0

(#) **Total Degree Requirements:** 128-129

(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

(1) The Pennsylvania State Board of Nursing requires two units of high school mathematics (one of which is algebra) for admission to the nursing major.

Allied Health Professions Programs

Helen C. Cunningham, Coordinator

Respiratory Care

Respiratory therapists assist physicians in the care of patients who have respiratory system problems or illness that relates to breathing. Their assistance includes administering gaseous drugs and executing therapeutic procedures. Included are the operation and maintenance of specialized equipment.

The program leads to the degree of Bachelor of Science in Respiratory Care. Presented jointly by IUP and the Western Pennsylvania Hospital in Pittsburgh, the program offers intensive theoretical and applied knowledge to produce highly skilled graduates who are prepared to enter the profession as therapists or instructors.

Two academic years of university studies, followed by two academic years of hospital studies and clinical practice, constitute the program. Incoming students must maintain a QPA of 2.25 in Natural Sciences and Mathematics to be considered for admission into the clinical years in Respiratory Care. However, since admission to the hospital is competitive, IUP cannot guarantee admission into the hospital program.

Bachelor of Science—Respiratory Care

Liberal Studies: As follows: 45

Composition: EN101, EN202
Humanities: three courses, one in each area (PH222 recommended)
Fine Arts: one course
Mathematics: MA110 or higher level
Natural Science: CH101-102
Social Sciences: PC101, SO151, non-Western course
Health and Wellness/ROTC: H&W recommended
Liberal Studies electives: one course from: BE/CO/IM101, PC378, BI265(1), other course as approved by adviser
Synthesis: not required

Major: 62

Required courses
Completed in junior and senior years at Western Pennsylvania Hospital in Pittsburgh

RT326	Respiratory Care Clinical Practice I	3sh
RT327	Pharmacology	3sh
RT328	Introduction to Respiratory Care	4sh
RT329	Respiratory Care Instrumentation	4sh
RT330	Cardiopulmonary Resuscitation	2sh
RT331	Introduction to Ventilator Management	1sh
RT333	Respiratory Care Clinical Practice II	4sh
RT334	Respiratory Care Instrumentation and Application	4sh
RT335	Nursing Arts	3sh
RT336	Cardiopulmonary Evaluation and Clinical Correlation	4sh
RT337	Introduction to Pulmonary Functions	1sh
RT426	Respiratory Care Clinical Practice III	5sh
RT427	Applied Pulmonary Physiology	4sh
RT428	Essentials of ECG Interpretation	2sh
RT429	Design and Function of Respiratory Care Department	2sh
RT430	Pulmonary Function Studies	2sh
RT431	Pediatric Respiratory Care	1sh
RT433	Respiratory Care Clinical Practice IV	5sh
RT434	Pediatrics and Selected Topics	3sh
RT436	Respiratory Care Teaching	2sh
RT437	Methods in Critical Care	2sh
RT438	Cardiopulmonary Rehabilitation	1sh

Other Requirements: 18

Science courses:

BI105	Cell Biology	4sh
BI150	Human Anatomy	3sh
BI151	Human Physiology	4sh
BI241	General Microbiology	3sh
PY151	Medical Physics Lecture	3sh
PY161	Medical Physics Lab	1sh

Free Electives: 0

(#) **Total Degree Requirements:** 125

(1) Pending approval of course as Liberal Studies elective.

(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

Medical Technology

Medical Technology encompasses the study of analytical and diagnostic procedures used in clinical laboratories and in medical research. Medical technologists perform a variety of laboratory tests upon which the physician depends for accurate diagnosis, prognosis, and proper treatment of the patient. The program of studies, presented jointly by IUP and accredited medical technology programs in hospitals, prepares the student to enter the profession. Upon completion of the four-year program, the degree of Bachelor of Science in Medical Technology is granted. The program also prepares the student for graduate and professional schools.

IUP maintains short and long-term affiliations with selected hospital schools. The Allied Health Professions coordinator provides student counseling and maintains a liaison with hospital schools. However, since admission to any hospital program is on a competitive basis, IUP cannot guarantee admission into any hospital program.

The following programs maintain permanent agreements of affiliations with IUP: Abington Memorial Hospital, Abington; Altoona Hospital, Altoona; Conemaugh Valley Memorial Hospital, Johnstown; Harrisburg Hospital, Harrisburg; Lancaster General Hospital, Lancaster; Latrobe Area Hospital, Latrobe; Polyclinic Medical Center, Harrisburg; Medical College Hospitals, Elkins Park Hospital, Elkins Park; St. Vincent Health Center, Erie; and Western Pennsylvania Hospital, Pittsburgh. Other temporary affiliations are negotiated for the convenience of the student.

Completion of academic studies at IUP and of one year of clinical experience qualifies the student to take a national certification examination. Successful results on this examination lead to certification as a professionally qualified medical technologist.

Bachelor of Science—Medical Technology

Liberal Studies: As follows 45
Composition: EN101, EN202
Humanities: three courses — one in each area (PH222 recommended)
Fine Arts: one course
Mathematics: MA110 or higher level
Natural Science: PY111/121 and 112/122
Social Sciences: three courses
Health and Wellness/ROTC: H&W recommended
Liberal Studies electives or synthesis: one course

Major: 32
Required courses: (1)

MT 494	Clinical Microbiology	8sh
MT 495	Clinical Chemistry	10sh
MT 496	Clinical Hematology/Coagulation	6sh
MT 497	Clinical Immunohematology	4sh
MT 498	Clinical Immunology/Serology	2sh
MT 499	Clinical Seminar	2sh

Other Requirements: Science sequence 45
Required courses:

BI105	Cell Biology	4sh
BI120	Animal Biology	5sh
BI361	Microbiology	3sh
BI364	Immunology	3sh
CH111-112	General Chemistry I and II	8sh
CH231-232	Organic Chemistry I and II	8sh
CH323	Analytical Methods	4sh
CH351	Biochemistry	4sh

Controlled electives:
Two courses from list: BI263, 352, 360, 472, 476 6sh

Free Electives: 4
BI151 Human Physiology strongly recommended

(#) **Total Degree Requirements:** 126

(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.
(1) These courses are offered by our affiliating hospital-based clinical programs. These areas of study are consistent with requirements of the Committee for Allied Health Education Accreditation (CAHEA). All six of these areas of study are completed during the final twelve months of the degree program at one of the affiliating hospitals.

Gerontology Certification Program

The Gerontology Certificate program provides an interdisciplinary approach to the systematic study of the aging and is designed to be combined with any undergraduate major at IUP. The 21-credit-hour program entails three core courses, three elective courses, and an internship that will provide experiential learning in an agency or program serving older adults. Many courses fulfill the requirements for the Liberal Studies program. Applications are available at 222 Zink Hall. For information call 357-7647.

Core Courses: (3 required) 9

HP 481	Health Aspects of Aging	3sh
	or	
BI 160	Biology of Aging	3sh
PC 312	Adult Development and Aging	3sh
SO 357	Sociology of Aging	3sh

Controlled Electives: 9
AN322, AN340, AN444, CS315, EN410, HE324, HE456, HP413, MG300, MG311, NU616, PC376, PC378, PH400, PH405, RH312, SA380, SO322,SO336, SO342, SO345, SO459.

Other Requirements: 3
XX 493 Internship 3sh

Other Courses:

GN 481	Special Topics	var 1 to 3sh
GN 482	Independent Study	var 1 to 3sh

Total Requirements: 21

Department of Safety Sciences

Robert D. Soule, Chairperson; Chekanski, Christensen, Engler, McClay, McClosky, Pacalo, Reed

The department offers the degree of Bachelor of Science in Safety Sciences with specialization in occupational safety and health. General industrial safety and mine safety tracks are offered within this curriculum.

The degree in Safety Sciences prepares the student for professional, administrative, managerial, and supervisory positions in industry, manufacturing, insurance, transportation, utility, government, construction, trade service industries, and others. There remains an acute need in Pennsylvania and the nation for university-educated occupational safety and health professionals. The curriculum includes a major of 36 semester hours in Safety Sciences and an additional 18 semester hours in related professional courses. A variety of elective courses are available in both the major and professional course fields that enable students to strengthen their primary interest areas.

Bachelor of Science—Safety Sciences/Industrial Safety Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications 55-56
Mathematics: MA121
Natural Science: CH101-102
Social Science: PC101, SO151
Liberal Studies electives: EC122, MA122, MA217, no course with SA prefix

Major: 36
Required courses: Industrial Safety Track

SA101	Introduction to Occupational Safety and Health	3sh
SA111	Principles of Industrial Safety I	3sh
SA211	Principles of Industrial Safety II	3sh
SA301	Health Hazard Identification	3sh
SA303	Control of Health Hazards	3sh
SA311	Industrial Fire Protection	3sh
SA402	Health Hazard Evaluation	3sh
SA412	Evaluation of Safety Programs	3sh
SA493	Internship	6sh

Controlled electives:

One course from list: SA345 or SA347		3sh
One additional SA elective		3sh

Other Requirements: 34
Additional Science and Math

PY111	Physics I Lecture	3sh
PY112	Physics II Lecture	3sh
PY121	Physics I Lab	1sh
PY122	Physics II Lab	1sh
BI155	Human Physiology and Anatomy	4sh

Behavioral elective:
One course from list: MG311, PC371, PC420, or SO340 3sh
Computer elective:
One course from list: BE/CO/IM101 or IM300 3sh
Professional courses:

MG330	Productions and Operations Management	3sh
HP242	Emergency Health Care	1sh

Technical Writing elective:
One course from list: EN322 or EN220 3sh
Controlled electives:
Three professional courses approved by student's adviser 9sh

Free Electives: 0

(#) **Total Degree Requirements:** 125-126

(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

Bachelor of Science—Safety Sciences/Mine Safety Track

Liberal Studies: As outlined in Liberal Studies section 55-56
with the following specifications:
Mathematics: MA121
Natural Science: CH101-102
Social Science: PC101, SO151
Liberal Studies electives: EC122, MA122, MA217, no courses with SA prefix

Major: 36

Required courses: Mining Safety Track

SA102	Introduction to Mine Safety and Health	3sh
SA111	Principles of Industrial Safety I	3sh
SA211	Principles of Industrial Safety II	3sh
SA231	Principles of Mine Safety I	3sh
SA232	Principles of Mine Safety II	3sh
SA301	Health Hazard Identification	3sh
SA401	Mine Ventilation	3sh
SA402	Health Hazard Evaluation	3sh
SA412	Evaluation of Safety Programs	3sh
SA493	Internship	6sh

Controlled electives:
One course from list: SA345 or SA347 3sh

Other Requirements: 34

Additional Science and Math

PY111	Physics I Lecture	3sh
PY112	Physics II Lecture	3sh
PY121	Physics I Lab	1sh
PY122	Physics II Lab	1sh
BI155	Human Physiology and Anatomy	4sh

Behavioral elective:
One course from list: MG311, PC371, PC420, or SO340 3sh

Computer elective:
One course from list: BE/CO/IM101 or IM300 3sh

Professional courses:

MG330	Productions and Operations Management	3sh
HP242	Emergency Health Care	1sh

Technical Writing elective:
One course from list: EN322 or EN220 3sh

Controlled electives:
Three professional courses approved by student's adviser 9sh

Free Electives: 0

(#) **Total Degree Requirements:** 125-126

(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

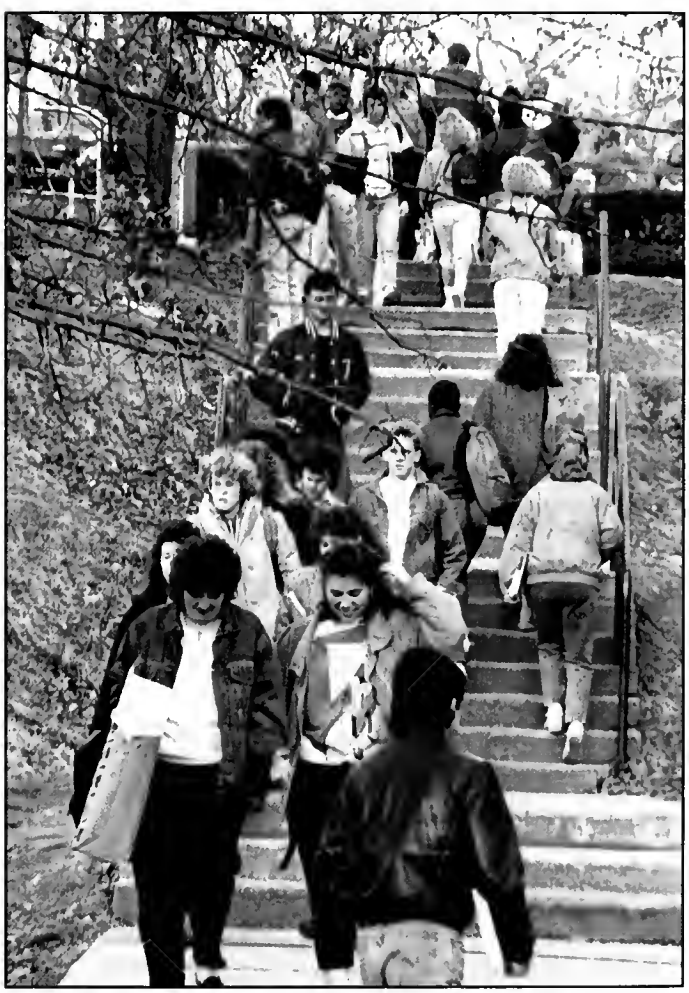
Minor—Safety Sciences 18

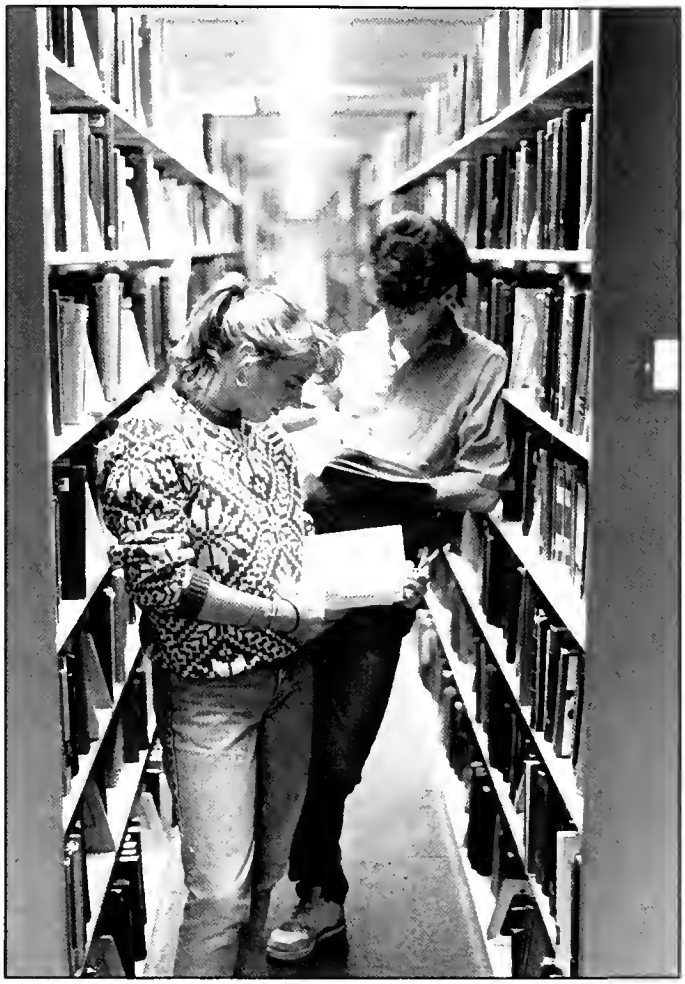
Required courses:

SA101	Introduction to Occupational Safety and Health	3sh(1)
SA111	Principles of Industrial Safety I	3sh(2)
SA301	Health Hazard Identification	3sh

Controlled electives:
Three SA courses approved by department chairperson 9sh

(1) SA102 Introduction to Mine Safety and Health may be an alternative for SA101.
(2) SA211 Principles of Industrial Safety II may be an alternative for SA111.





The College of Humanities and Social Sciences

Brenda L. Carter, Dean
Sherwood E. Zimmerman, Interim Associate Dean

The College of Humanities and Social Sciences has as its objective the providing of a liberal education as the basis of the student's preparation for a satisfying career. In a dynamic society such as America's, a broad liberal education accompanying career preparation is a necessity. The college maintains an emphasis on the fundamental understanding and application of the basic principles of our cultural heritage, combined with development of a thorough background of knowledge in the student's specific area of interest. It seeks to promote in students critical and objective thinking, analytical skill, and a keen awareness of their responsibilities to society.

The college offers majors in:

Anthropology
Criminology
Economics
English
Foreign Languages and International Trade
French
Geography
German
Government and Public Service
History
Industrial and Labor Relations
International Studies
Journalism
Law School Preparation
Philosophy
Political Science
Regional Planning
Religious Studies
Sociology
Spanish

Degrees

The departments of Anthropology, Criminology, Economics, English, French, Geography and Regional Planning, German, History, Journalism, Philosophy and Religious Studies, Political Science, Spanish and Classical Languages, and Sociology offer work leading to a Bachelor of Arts degree. The Bachelor of Science is offered in Regional Planning. In addition, the Associate of Arts degree is offered by the Criminology Department at the Punxsutawney campus. Several departments offer Master of Arts or Master of Science degrees in the university's Graduate School. The English and Criminology departments offer graduate programs leading to the Doctor of Philosophy degree. Information about these programs may be obtained from the Graduate School.

Degree Requirements

In addition to the university's Liberal Studies requirements, all students seeking a baccalaureate degree in the College of Humanities and Social Sciences must complete the requirements for a major as established by the department through which they wish to specialize. Statements of these requirements, and for those minoring in a specific field, appear in the department sections that follow. A double major or minor may encompass a discipline outside as well as within the college but should be selected only with adviser approval. As a general principle, there is considerable latitude in course choice for Humanities and Social Sciences majors. The intermediate-level foreign language requirement (a description follows) applies without exception to all Humanities and Social Sciences four-year degree programs.

College Language Requirements and Liberal Studies

Students in the colleges of Natural Sciences and Mathematics and of Humanities and Social Sciences, who must pass the intermediate-level language sequence as a college requirement for graduation, may choose any one of the five languages offered. Self-instruction in Critical Languages fulfills the Liberal Studies requirement only in the College of Humanities and Social Sciences. The student with no previous foreign language study will take the entry-level courses as prerequisites. The credits will not be applicable to any college or departmental requirements but may be counted as free electives in the total required for graduation. Generally, students should schedule courses in accordance with their previous school or practical background.

Individual placement will be determined during placement testing and registration prior to the first semester or summer session at IUP. Students whose placement testing demonstrates possession of competence equivalent to the intermediate level are considered to have fulfilled this requirement.

Any foreign student, registered as such at IUP, whose acquired native language is other than English and who demonstrates an acceptable proficiency in English, is exempt from the foreign language requirement for a Humanities and Social Sciences degree if the department he/she is majoring in does not require a specific language.

Critical Language Program

This is a self-instructional course for the study of languages not taught in the classroom. The students are provided with texts, cassettes, and the services of a native speaker. Professional teachers of language from other universities will test performance. Interested students must contact the coordinator before registration. Each course is worth 3sh.

The following languages may be available for study: Arabic, Chinese, Dutch, Modern Greek, Modern Hebrew, Classical Hebrew, Hindi, Hungarian, Italian, Japanese, Korean, Persian, Polish, Portuguese, Russian, Serbo-Croatian, Swahili, Swedish, Tagalog, Thai, Turkish, and Vietnamese.

For information, contact Dr. Victor S. Drescher, Director of the Critical Languages Program.

Foreign Study Programs

College majors may be interested in the various Foreign Study Programs and Tours. Credits obtained through such arrangements normally are applicable toward a Humanities and Social Sciences degree. Also of interest are the college's credit-awarding programs at Valladolid (Spain), Duisburg (Germany), and Nancy (France), as well as the Summer Study in Mexico Program. For information, contact the Office of the Dean of Humanities and Social Sciences.

IUP at Valladolid: Through the Spanish and Classical Languages Department, the university has offered a spring semester of study at the University of

Valladolid, Spain, for the past seventeen years. The participants live in private homes. For details and brochures, contact the Department of Spanish and Classical Languages.

IUP at Duisburg. IUP has a study abroad program at the University of Duisburg, West Germany. The program is open to German majors and other students having specific interest in a foreign study experience. Students must register for FL 100 and pay a foreign exchange fee for each semester in the program. For further information, contact the German Department.

IUP at Nancy: IUP has established a study program with the University of Nancy, France. Two separate study programs are available. Program A is intended for those participants who have studied advanced French courses and for French majors. Program B is designed primarily for the nonmajor or for the student who wishes to enroll for just one semester. Participants in the Nancy program must register for FL 100 and pay a foreign exchange fee for each semester in the program. For details, contact the French Department.

IUP - Mexico Summer Program - The Spanish and Classical Languages Department sponsors a program of study in Spanish language in Mexico. The program is located at Cuernavaca, and the cost of the program includes transportation, complete room and board, insurance, and tuition. The student may earn up to 6 hours of undergraduate or graduate credit. Internship opportunities are available for students with fluency in Spanish.

Preprofessional Programs

The College of Humanities and Social Sciences offers a preprofessional program in pre-law that prepares the student for application to a law school. This minor is in the following Social Sciences, Humanities, and Business departments: Pre-law in Business, Criminology, Economics, English, History, Philosophy, or Political Science. All programs are designed to lead to a baccalaureate degree and prepare students for law school.

Coursework in the pre-law program centers upon a carefully developed interdisciplinary minor. For detailed guidance in pre-law, students should consult the pre-law adviser in their major department.

Internship Programs

Humanities and Social Science departments have established programs under which students engage in off-campus supervised work experience for credit. IUP students have worked in Harrisburg as aides to state legislators, with the Governor's Justice Commission and the Local Government Commission, and with the Investigations Division, Pennsylvania Department of Justice. Others have worked at correctional institutions in Pittsburgh, Greensburg, and Warrendale, as peer group counselors on the local campus, as an assistant to the Pennsylvania state Republican chairperson, as on-site guides at the United Nations, as workers on an Israeli kibbutz, and as student aides for the Department of Education, Puerto Rico. Other students have worked in the Pittsburgh federal probation office. Many students have worked with major political parties and candidates at the local and state levels. At the county level, they have been attached to the offices of the county planner, the Common Pleas Court, coroner, treasurer, commissioners, and borough manager. Students have also worked in the Washington offices of Pennsylvania congressmen and in many federal and international organizations in Washington as well. Opportunities for internships in other countries exist. For more information about specific internship programs, students should consult with the chair of the department in which the student is majoring.

Minor in Asian Studies

The Asian Studies Minor is an interdisciplinary program drawing on courses in the departments of Art, Geography and Regional Planning, History, Philosophy and Religious Studies, Political Science, and Sociology/Anthropology. This program seeks to prepare people for membership in the world community, to increase an awareness and understanding of Asian peoples and cultures, to aid in understanding ourselves through understanding others, and to add skills and knowledge to those seeking jobs.

For further information on this program, contact Dr. Brenda Carter, Dean, College of Humanities and Social Sciences.

Minor in Comparative Literature

Students may elect a minor in Comparative Literature. For further information on this program, contact Dr. Brenda Carter, Dean, College of Humanities and Social Sciences.

Department of Anthropology

Miriam Chaiken, Chairperson; Conelly, Garcia, Koetje, Kruckman, P. Neusius, S. Neusius, Olin-Fahle; and professor emerita Lanham

The Anthropology Department, which was a component of the Sociology/Anthropology Department, became a separate department effective July 1, 1993.

The Anthropology Department promotes awareness of anthropological knowledge and methods and seeks to further the discipline and its applications to the problems of the contemporary world. Through teaching, research, and involvement in campus and community events and programs, the anthropology faculty members contribute to the liberal education of IUP students. The anthropology major itself equips students with knowledge and skills needed for full participation in the global environment of the 21st century.

Anthropology emphasizes the study of human biological and cultural diversity within its four subfields: sociocultural anthropology, biological anthropology, linguistics, and archaeology. All students receive a solid foundation in the discipline of anthropology and tailor their major to specific interests by following one of the three tracks.

The General Anthropology track continues the student's education in all of the subfields of anthropology, preparing the student for a graduate education in anthropology or in one of many related fields. The general track also provides a solid base for interdisciplinary study with a number of other fields including biology, philosophy, political science, psychology, religious studies, sociology, and Spanish.

The Archaeology track provides an emphasis on the study of culture through the material remains of human behavior. This track provides training for careers in the growing fields of cultural resource management and historic preservation, with opportunities for employment in both government and the private sector. A wide variety of internship opportunities provide hands-on training in these areas.

The Applied Anthropology track provides students with a background in anthropological method and theory, a cross-cultural perspective, and an avenue to translate this knowledge into action through internships and research. Examples of career opportunities include program design, implementation, and evaluation; policy analysis; administrative and managerial development; assessment of current and future human needs; and creation of strategies for social intervention and advocacy. In consultation with an adviser, each student will develop his or her own curriculum in order to build expertise in a specific topical area.

The department also offers preparation for teaching social studies with a concentration in anthropology. This program leads to a Bachelor of Science in Education degree. With its emphasis on cross-cultural comparisons, the realities of contemporary global cultures, and cultural resource management, anthropology provides a solid foundation for teaching social science at the secondary level. Additionally, the department offers a minor in anthropology.

Bachelor of Arts—General Anthropology Track

Liberal Studies: As outlined in Liberal Studies section 53-54
with the following specifications:
- Mathematics: MA217
- Social Science: SO151 (recommended)
- Liberal Studies electives: BE/CO/IM101 (recommended), no courses with AN prefix

College: 0-6
- Foreign Language Intermediate Level (1)

Major: 33
Required courses
AN211 Cultural Anthropology 3sh
AN222 Biological Anthropology 3sh
AN233 Language and Culture 3sh
AN244 Basic Archaeology 3sh
AN456 Field Research Methods 3sh
Controlled electives:
One theory course:
AN480 Anthropology Seminar or 3sh
SO447 Modern Sociological Theory (2)
Three courses in Topical Area Ethnography such as: 9sh
AN271 Cultural Area Studies: Africa
AN272 Cultural Area Studies: China
AN273 Cultural Area Studies: Southeast Asia
AN274 Cultural Area Studies: Latin America
AN314 Native Americans
Two additional AN electives (300 or 400 level) 6sh

Other Requirements: 0

Free Electives: 37-38

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) SO447 Modern Sociological Theory may be taken only with approval of the adviser

Bachelor of Arts—Anthropology/Archaeology Track

Liberal Studies: As outlined in Liberal Studies section 53-54
with the following specifications:
Mathematics: MA217
Natural Science: GS121/122-131/132 (recommended)
Social Science: SO151 (recommended)
Liberal Studies electives: BE CO IM101 (recommended), no courses with AN prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 36
Required courses
AN211 Cultural Anthropology 3sh
AN222 Biological Anthropology 3sh
AN233 Language and Culture 3sh
AN244 Basic Archaeology 3sh
Controlled electives
Three methods courses:
AN317 Archaeological Research Design and Analysis 3sh
AN320 Archaeological Field School (2) 6sh
AN415 Cultural Resource Management 3sh
One theory course:
AN480 Anthropology Seminar or 3sh
SO447 Modern Sociological Theory (3)
Two area courses, one in archaeology and one in ethnography, such as:
AN213 World Archaeology *or* 3sh
AN315 North American Archaeology
and
AN314 Native Americans *or* 3sh
AN271/272/273/274 Cultural Area Study
One topical course such as:
AN401 Sociocultural Change or 3sh
AN420 Cultural Ecology

Other Requirements: 0

Free Electives: (4) 37-38

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives
(2) For approval by adviser, an equivalent field school of another university must have a lab component.
(3) SO447 Modern Sociological Theory may be taken only with approval of the adviser
(4) A minor in Geoscience, Geography, History, or other approved field is recommended. An internship (AN493) also is recommended. Your adviser should be consulted

Bachelor of Arts—Anthropology/Applied Anthropology Track

Liberal Studies: As outlined in Liberal Studies section 53-54
with the following specifications:
Mathematics: MA217
Social Science: SO151 (recommended)
Liberal Studies electives: BE CO IM101, no courses with AN prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 36
Required courses:
AN211 Cultural Anthropology 3sh
AN222 Biological Anthropology 3sh
AN233 Language and Culture 3sh
AN244 Basic Archaeology 3sh
Controlled electives:
Two methods courses
AN360 Applied Anthropology 3sh
AN456 Field Research Methods 3sh
One theory course:
AN480 Anthropology Seminar or 3sh
SO447 Modern Sociological Theory (2)
One area course
AN314 Native Americans or 3sh
AN271/272/273/274 Cultural Area Study
Two additional AN electives (300 or 400 level) 6sh
Internship in Anthropology (3) 6sh

Other Requirements: (recommended) 0
LN322 Technical Writing
SO231 Contemporary Social Problems
SO457 Computer Use in Sociology

Free Electives: 34-35

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) SO447 Modern Social Theory may be taken only with permission of the adviser
(3) Internship is highly recommended but may be replaced by 6sh of pragmatic skill courses upon approval of adviser.

Bachelor of Science in Education—Social Sciences Education/Anthropology Concentration (*)

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications
Social Science: AN211, EC121, PC101
Liberal Studies electives: EC122, GE230, no courses with AN prefix

College: 30
Professional Education Sequence (1)
CM301 Technology for Learning and Instruction 3sh
ED242 Pre-student Teaching I 1sh
ED342 Pre-student Teaching II 1sh
ED441 Student Teaching 12sh
ED442 School Law 1sh
ED455 Teaching of Social Sciences in Secondary School 3sh

EP202	Educational Psychology	3sh
EP377	Educational Tests and Measurement	3sh
EL202	American Education in Theory and Practice	3sh

Major: 21

Required Anthropology courses

AN211	Cultural Anthropology	sh
AN222	Biological Anthropology	3sh
AN233	Language and Culture	3sh
AN244	Basic Archaeology	3sh

Two area ethnography courses

(AN271, AN272, AN273, or AN314) 6sh

Two additional Anthropology courses numbered 300 or above 6sh

History Distributional Requirements: 9

Any two History courses which focus on the U.S. 6sh

Any Non-Western or World History course 3sh

Required Social Science Distribution: 6

PS280 or PS285 3sh

GE104, GE252, GE255, GE256, or GE257 3sh

Other Requirements: 0

Free Electives: (2) 0-17

Total Degree Requirements: 124

(1) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."

(1) Students who do not pass a special education competency test must take EX300; this will reduce free electives.

(2) If certain courses are chosen for Social Sciences major, they may also fulfill Liberal Studies requirements and permit additional free electives.

Minor—Anthropology 15

Required course:

AN110	Contemporary Anthropology	3sh

Controlled electives:

Four additional courses in Anthropology 12sh

Department of Criminology

Joseph Bogan, Chairperson; Austin, Berg, Cohen, Gibbs, Hanrahan, Iovanni, Martin, McCauley, McNabb, Melodini, Moyer, Mutchnick, J. Thomas, Wegener, Wilson, Zimmerman

The Department of Criminology offers men and women who seek a career in the criminology field a broad liberal arts education supported by a professional education program. The degree offered is the Bachelor of Arts degree with a major in Criminology, under the College of Humanities and Social Sciences; also available are a Two-year Academic Diploma, an Associate of Arts degree, and a minor in Criminology.

The program in Criminology has a five-fold objective:

1. The education of students for employment and leadership in the expanding field of criminology.
2. The education of presently employed criminal justice personnel who recognize the need for raising their educational level.
3. The instruction of students who wish to acquire an understanding of the processes of criminal justice as a cultural part of their higher education.
4. The instruction of students who wish to prepare for graduate study and research in criminology.
5. A curriculum that provides an excellent foundation for students preparing for a career in law.

Nearly every level of government offers opportunities for professional careers in criminology. Employment opportunities normally exist in more than fifty federal agencies, including the Federal Bureau of Investigation, U.S. Secret Service, Bureau of Narcotics, Intelligence Division (IRS), Inspection Service (IRS), Alcohol Tobacco Tax Division (IRS), State Department Security, Atomic Energy Commission, and military investigative branches. Both men and women will find employment opportunities in parole and probation work for federal, state, and local governments and institutional careers concerned with the custody and treatment of juveniles and adults at all levels of government. In addition, many police departments have specialized units dealing with juveniles, community relations, training, and research. There are a wide variety of opportunities in traffic administration and investigative and security activities in the commercial and industrial fields.

Career opportunities are available also in research and teaching at the college and university level and in research divisions of agencies in the field of administration of justice.

Students who wish to change their major to Criminology or Pre-Law Criminology must have an overall Q.P.A. of 2.5 in order to declare the major and to be accepted formally by the department.

Independent Study and Individualized Instruction are available by permission. To grant permission, the department requires:

(a) Independent Study: Students must have a minimum Q.P.A. of 2.5 in both the major and overall coursework. Students must also have completed 80 semester hours including 18 hours of Criminology courses. Nine (9) of the 18 hours of Criminology credits must be required courses. Internship credits do not count toward the 18 Criminology credits.

(b) Individualized Instruction: Students must have completed 94 semester hours including 24 hours of Criminology courses. Internship credits do not count toward the required 24 Criminology credits.

Bachelor of Arts in Criminology

Liberal Studies: As outlined in Liberal Studies section 53-55

with the following specifications:

Liberal Studies electives: no courses with CR prefix

College: 0-6

Foreign Language Intermediate Level (1)

Major: 36

Required courses:

CR102	Survey of Criminology	3sh
CR210	Criminal Law	3sh
CR300	Theories of Complex Criminal Justice Organizations	3sh
CR306	Research Methods	3sh
CR400	Theoretical Criminology	3sh
CR401	Contemporary Issues	3sh

Controlled electives:

One course from list: CR416, 451, 470, 491	3sh
Five additional Criminology courses	15sh(2)

Free Electives: (3) 27-35

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

(2) No more than 6sh of CR493: Internship may be applied to 36sh minimum in major.

(3) Students selecting a minor may apply no more than 15sh outside College of Humanities and Social Sciences without special approval.

Bachelor of Arts in Criminology/Pre-Law

Liberal Studies: As outlined in Liberal Studies section 53-55

with the following specifications:

Liberal Studies electives: no courses with CR prefix

College: 0-6

Foreign Language Intermediate Level (1)

Major: 36
Required courses:

CR102	Survey of Criminology	3sh
CR210	Criminal Law	3sh
CR300	Theories of Complex Criminal Justice Organizations	3sh
CR306	Research Methods	3sh
CR357	Law, Social Control, and Society	3sh
CR400	Theoretical Criminology	3sh
CR401	Contemporary Issues	3sh

Controlled electives:

One course from list: CR416, 451, 470, 491	3sh
Five additional Criminology courses	15sh(2)

Other Requirements: Pre-law interdisciplinary minor 6-21
Seven courses, including at least one from each of six areas
Business: BE235, AG201, AG202
Economics: EC121, EC122, EC332
English: EN213, EN220, EN310
History: HI320, HI321, HI346
Philosophy: PH101, PH222, PH450
Political Science: PS358, PS359, PS361

Free Electives: (3) 6-23

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) No more than 6sh of CR493: Internship may be applied to 36sh minimum in major.
(3) Students selecting a minor may apply no more than 15sh outside College of Humanities and Social Sciences without special approval.

Associate of Arts in Criminology (offered only at Punxsutawney)

Liberal Studies: As follows: 33

English: EN101, EN202	7sh
Mathematics: MA101 or substitute	3sh
Humanities, one course from lists	3sh
Fine Arts: one course from list	3sh
Natural Science: laboratory science sequence required	8sh
Social Science: PC101, PS111, SO151	9sh

Major: 18
Required courses:

CR101	Crime and Justice Systems	3sh
CR102	Survey of Criminology	3sh
CR210	Criminal Law	3sh
CR270	Juvenile Justice System	3sh
CR283	Police Patrol Management	3sh
CR291	Theory and Techniques of Interviewing	3sh

Other Requirements: 0

Free Electives: 9

Total Degree Requirements: 60

Minor in Criminology

Minor: (1) 18
Required courses:

CR102	Survey of Criminology	3sh
CR210	Criminal Law	3sh
CR300	Complex Organization	3sh
CR306	Research Methods	3sh
CR400	Theoretical Criminology	3sh
CR401	Contemporary Issues	3sh

(1) Must have formal criminology department approval to be admitted to minor in Criminology

Department of Economics

Donald A. Walker, Chairperson; Asamoah, Cross, Dyal, Garvin, Holt, Huff, Karatjas, Martel, Radakovic, Radell, Stonebraker, Ware

The Department of Economics offers programs for majors who intend to pursue careers as economists in education, government, industry, finance, or commerce. The economist in today's world occupies an increasingly important position, and great opportunity exists for qualified people.

Three different degree programs are available: a Bachelor of Arts in Economics that prepares students for immediate employment or graduate school, a pre-law Bachelor of Arts in Economics for students who wish to attend law school; and the Bachelor of Science in Education that prepares students to teach economics and other social sciences in secondary schools.

The Department of Economics offers concentrations in particular areas of Economics. The concentrations are designed to equip students with the education and skills that will enable them to obtain a position in government or private business upon completion of the undergraduate program. The concentrations available at present are
Competition and Public Policy
Economics of Government Affairs
International Economics
Labor Economics
Managerial Economics
Quantitative Economics
Detailed information regarding these concentrations may be obtained from the department chairperson. Concentrations are not restricted to Economics majors.

Either Basic Economics (EC101) or Principles of Economics (EC121) will count as a Liberal Studies Social Science course. However, EC101 is intended for students who will take one and only one course in the field. Students who anticipate taking more than one Economics course should schedule EC121. EC101 will not count toward either a major or minor in Economics and may not be taken after the successful completion of or in concurrent registration with any other Economics course.

Economics majors are encouraged to minor in a related field. Mathematics, Business, Computer Science, or another Social Science might be especially useful. A minor in Mathematics is strongly recommended for anyone contemplating possible graduate work in Economics.

Economics majors are encouraged to minor in one of the other Social Sciences, in Business, or in Mathematics. A minor in Mathematics is strongly recommended for those whose future may include graduate work in Economics.

The Department of Economics also houses the Center for Economic Education. The center is a nonprofit, nonpartisan organization affiliated with both the Pennsylvania Council on Economic Education (PCEE) and the national Joint Council on Economic Education (JCEE). Its mission is to upgrade the quality of economic education in kindergarten through twelfth grade. The Center for Economic Education performs the following functions: teacher training, consulting services, research, materials development, and programs in economic education for adults. Drs. Nicholas Karatjas and Arthur H. Martel are co-directors of the center.

Bachelor of Arts—Economics

Liberal Studies: As outlined in Liberal Studies section with the following specifications 53-56
Social Science: EC121
Mathematics: MA110 or MA121 (1)
Liberal Studies electives: no courses with EC prefix

College: 0-6
Foreign Language Intermediate Level (2)

Major: 24
Required courses:

EC121	Principles of Economics I	*sh
EC122	Principles of Economics II	3sh

EC355	Statistics for Economists	3sh(3)
EC421	Macro Analysis	3sh
EC422	Micro Analysis	3sh
MA121	Calculus I for Natural and Social Sciences and Business	sh(1)

Controlled electives:
Four other EC courses 12sh

Free Electives: 38-47

Total Degree Requirements: 124

(1) MA123 or MA127 may be substituted for MA121
(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(3) MA214, MA217 or MA363 may be substituted for EC355

Bachelor of Arts—Economics/Pre-law

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-56
Social Science: EC121
Mathematics: MA110 or MA121 (1)
Liberal Studies electives: no courses with EC prefix

College: 0-6
Foreign Language Intermediate Level (2)

Major: 24
Required courses:

EC121	Principles of Economics I	sh
EC122	Principles of Economics II	3sh
EC355	Statistics for Economists	3sh(3)
EC421	Macro Analysis	3sh
EC422	Micro Analysis	3sh
MA121	Calculus I for Natural and Social Sciences and Business	sh(1)

Controlled electives:
Four other EC courses 12sh

Other Requirements: Pre-law interdisciplinary minor 6-21
Seven courses, including at least one from each of six areas:
Business: BE235, AG201, AG202
Criminology: CR210, CR260, CR357
English: EN213, EN220, EN310
History: HI320, HI321, HI346
Philosophy: PH101, PH222, PH450
Political Science: PS358, PS359, PS361

Free Electives: 17-36

Total Degree Requirements: 124

(1) MA123, or MA127 may be substituted for MA121
(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(3) MA214, MA217, or MA363 may be substituted for EC355.

Bachelor of Science in Education—Social Science Education/Economics Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55
Social Science: PC101, PS111, AN110 or AN211
Mathematics: MA110 or MA217 or MA121
Liberal Studies electives: GE230, SO237

College: 30
Professional Education Sequence

CM301	Technology for Learning and Instruction	3sh
ED242	Pre-student Teaching I	1sh
ED342	Pre-student Teaching II	1sh
ED441	Student Teaching	12sh
ED442	School Law	1sh
ED455	Teaching of Social Science in the Secondary School	3sh
EP202	Educational Psychology	3sh
EP377	Educational Test and Measurement	3sh
FE202	American Education in Theory and Practice	3sh

Major: 21
Required Economics courses:

EC121	Principles of Economics I	3sh
EC122	Principles of Economics II	3sh

Controlled Economics electives: 15sh
Upper-level Economics courses including at least one writing-intensive course and at least one course from each of the following three groups:
International courses: EC339, EC345, EC350, EC351
Macroeconomic courses: EC325, EC343, EC421
Microeconomic courses: EC283, EC330, EC331, EC332, EC333, EC335, EC336, EC373, EC383

Other Requirements: 15-18
Required Social Science distribution

HI203	U.S. History for Historians	3sh
GE___		3sh
PS280 or PS285	Comparative Governments	3sh
Social Science minor		6-9sh(1)

Free Electives: 0-4

Total Degree Requirements: 124

( ) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Students must complete a minor in second Social Science of their choice. The coursework for each alternative is described below. Some of the courses chosen may also fulfill the third Liberal Studies elective course above.
1. Anthropology: AN110 or AN211, 12 additional sh in AN
2. Geography: GE230 (3sh) and 12 additional sh in GE
3. History: HI195 (3sh), HI203 (3sh), 9 additional sh in HI
4. Political Science: PS111, PS280 or PS285, 9 additional sh in PS
5. Sociology: SO151, SO237, 9 additional sh in SO

Minor in Economics

Minor: 15
Required courses:

EC121	Principles of Economics I	3sh
EC122	Principles of Economics II	3sh

Three courses from EC200 or higher 9sh

Department of English

James Gray, Chairperson; Aghbar, Alvine, Benelich, Berlin, Bower, Cahalan, Carse, Chow, Cook, Curey, Dandurand, Downing, Emerick, Fritz, Gatti, Gebhard, Goebel, Haldeman, Hartwell, M. Hayward, N. Hayward, Heny, B. Hudson, S. Hudson, Hurlbert, R.G. Johnson, Kilwein-Guevara, Kraszewski, Krupnik, Masiello, McAndrew, D. McClure, S. McClure, McManmon, Rodriguez-Milanes, Murphy, Nania, Norris, Perdue, Rafoth, R. Roffman, Ruh, Savova, R. Shafer, Slater, Smits, Swigart, Tannacito, R.L. Thomas, Vella, Waddell, Welsh, Williamson, T.K. Wilson, Woodworth, Yarup, Zalazar; and professors emeriti Anderson, Beck, Betts, J. Bright, L. Bright, Brown, Craig, Davis, Freund, Grayburn, Hazley, Hull, Lucker, Miller, Rider, Roumm, Seacrist, Seinfelt, Smith, Watta

The program of studies in the English Department at IUP focuses on critical thinking and effective writing at all levels. English majors study a wide variety of subjects ranging from literary theory to practical pedagogy, in an atmosphere that encourages and fosters a high degree of professional commitment.

Course choices depend upon a student's career goals; three specialized majors are offered, each of which undergoes regular revision to reflect the needs of students and the structure of a changing, competitive job market.

The English Education program offers special training for prospective secondary school teachers. IUP's consistent success in placing graduates from this major in teaching positions suggests that the program is viewed highly among educators outside the university.

Pre-law offers specialized training for those interested in a career in law or some related field. The B.A. in English Humanities offers a wide range of courses in both traditional and nontraditional areas, which allows students to tailor their programs to reflect their own interests and career plans.

The department offers the following degrees:

English Humanities

The English Department B.A. Humanities curriculum emphasizes several of the traditional concerns of English literary study in nontraditional ways. Specifically, the student satisfies the literature requirements by taking preliminary courses which survey English and American literature and then choosing particular courses from each of five categories, each category reflecting a specific focus.

One category focuses upon literature as a "mode of awareness," a philosophic emphasis, and offers such courses as "The Metaphoric Perspective," "Symbol and Allegory," "The Oral Tradition," etc.

A second category views literature from an historical perspective and offers such courses as "The Puritan Mind in England and America," "The Renaissance," and "Romanticism."

A third category examines literature from a psychological point of view through such courses as "Myth in Literature," "Hero and Anti-Hero," and "The Literature of Alienation."

The fourth category deals with social considerations of perennial importance and offers such courses as "War in Literature," "Poverty and Class," and "Man in the Natural World."

The fifth category examines the literary output of a single major author: Chaucer, Shakespeare, Milton, or a major American author or authors.

Courses from other areas (Critical, Creative and Technical Writing, Speech, Film, Language, and Communication Studies) complement the literature program selected by the student with his or her adviser's assistance.

Students, especially those for whom the B.A. is a terminal degree, are advised to consider an internship in their junior or senior year.

Since the major can be completed with 36 hours of coursework, students have 30-36 hours, depending on their foreign language status, of unspecified coursework. They should plan carefully with their adviser as to how these credits might best be earned, relevant to future goals.

Education Program

The English Department offers a program leading to the Bachelor of Science Degree in English Education. Graduates are prepared to teach in middle, junior high, and senior high schools. Job opportunities in these areas have risen significantly in the past few years.

The English Education majors receive all of the usual professional training, including practical experience in methods courses and student teaching, but they are also graduated with a thorough preparation in the subject matter areas of literature, language, and composition. Although most students choosing an English Education major will be fitted both by training and desire for the secondary school classroom, those who opt not to teach will find that their speaking and writing skills can be useful to the media, governmental services, and industries.

Program requirements are available at the English Department office. Requirements include a portfolio of written work, faculty evaluations, and an annual review of progress.

Pre-Law English

One can hardly imagine a successful lawyer who does not possess excellent skills in writing and speaking and who is not able to analyze a problem and explain its solution in clear, logical terms. Pre-Law English prepares the student especially well in these areas and provides the skills and knowledge needed to do well in the law school admissions examination.

In addition, the English Department offers at regular intervals a section of Advanced Composition designed to fit the needs of pre-law students. Many graduates have had successful internship experiences in the offices of practicing attorneys and government agencies.

Minor in English Department

To minor in English, 15 semester hours in English are required beyond the Liberal Studies requirement of EN101, EN121, and EN202.

Students who choose to minor in English should, if their major department concurs, substitute EN210, Introduction to Literary Analysis for EN121.

English as a Second Language (ESL) Program

The English Department's English as a Second Language curriculum consists of a sequence of courses: EN150 ESL, EN100 ESL, EN101 ESL, EN121 ESL, and EN202 ESL. These courses satisfy the same university and college requirements as their non-ESL equivalents; like the non-ESL courses, they are designed to focus on skills needed for successful use of language in an academic setting. However, the methodology and curriculum for these courses are specially designed to meet the needs of non-native speakers of English, and only non-native students are permitted to enroll in sections designated "ESL." Placement of students in these sections is determined by the results of the English Department ESL Placement Test, given at the beginning of each term.

The Writing Center

The English Department maintains a writing center, which all students are encouraged to use. Instructors may recommend students to the center, or students may seek help on their own. Call the English Department for information on hours of operation.

Bachelor of Arts—English

Liberal Studies: As outlined in Liberal Studies section — 53-55
with the following specifications:
- Humanities—Literature: EN210
- Liberal Studies electives: no courses with EN prefix

College: — 0-6
- Foreign Language Intermediate Level (1)

Major: — 36
- Required courses:
  - EN211 English Literature to the Restoration — 3sh
  - EN212 English Literature from the Restoration to 1900 — 3sh
  - EN213 American Literature: Beginnings to Present — 3sh
- Controlled electives:
  - One course from list A: EN350, 351, 352, 353 — 3sh
  - One course from list B: EN360, 361, 362, 363 — 3sh
  - One course from list C: EN370, 371, 372, 373 — 3sh
  - One course from list D: EN380, 381, 382, 383 — 3sh
  - One course from list E: EN208, 310, 311, 312, 313, 329, 330, 331, 332, 333, 334 — 3sh
  - One course from list F: EN220, 221, 320, 321, 322 — 3sh
  - One course from list G: EN 340, 341, 342, 343 — 3sh
  - Two courses from list H: Any two Special Topics courses (EN 481) or any two courses from Lists A through G above, or a combination of one Special Topics (EN 481) and one course from Lists A through G above, or the Senior Seminar (EN 480) in combination with either any Special Topics (EN 481) or any course from Lists A through G above. — 6sh(2)

Other Requirements: — 0
- Comprehensive Examination at conclusion of senior year

Free Electives: 27-35

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) Any EN481 course must have prior approval from department chair if it is to apply to the student's major.

Bachelor of Arts—English/Pre-law

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55
- Humanities—Literature: EN210
- Liberal Studies electives: no courses with EN prefix

College: 0-6
- Foreign Language Intermediate Level (1)

Major: 36
- Required courses:
  - EN211 English Literature to the Restoration 3sh
  - EN212 English Literature from the Restoration to 1900 3sh
  - EN213 American Literature: Beginnings to Present 3sh
- Controlled electives:
  - One course from list A: EN350, 351, 352, 353 3sh
  - One course from list B: EN360, 361, 362, 363 3sh
  - One course from list C: EN370, 371, 372, 373 3sh
  - One course from list D: EN380, 381, 382, 383 3sh
  - One course from list E: EN208, 235, 310, 311 312, 313, 329, 330, 331, 323, 333, 334 3sh
  - One course from list F: EN220, 221, 222, 223, 321, 324 3sh
  - One course from list G: EN340, 341, 342, 343 3sh
  - Two courses from list H: Any two Special Topics courses (EN481) or any two courses from Lists A through G above, or a combination of one Special Topics (EN 481) and one course from Lists A through G above, or the Senior Seminar (EN480) in combination with either any Special Topics (EN481), or any course from Lists A through G above. 6sh(2)

Other Requirements: Pre-law interdisciplinary minor 3-21
- Seven courses, including at least one from each of six areas:
  - Business: BL235, AG201, AG202
  - Criminology: CR210, CR260, CR357
  - Economics: EC121, EC122, EC332
  - History: HI320, HI321, HI346
  - Philosophy: PH101, PH222, PH450
  - Political Science: PS358, PS359, PS361
  - Comprehensive Examination at conclusion of senior year

Free Electives: 6-26

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies elective.
(2) Any EN481 course must have prior approval from department chair if it is to apply to the student's major.

Bachelor of Science in Education—English Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55
- Humanities—Literature: EN210
- Fine Arts: TH101
- Social Science: PC101
- Liberal Studies electives: Intermediate-Level Foreign Language, no courses with EN prefix

College: 30
- Professional Education Sequence
  - CM301 Technology for Learning and Instruction 3sh
  - ED242 Pre-student Teaching I 1sh
  - ED342 Pre-student Teaching II 1sh
  - ED441 Student Teaching 12sh
  - ED442 School Law 1sh
  - ED452 Teaching of English in the Secondary School 3sh
  - EP202 Educational Psychology 3sh
  - EP377 Educational Tests and Measurement 3sh
  - FE202 American Education in Theory and Practice 3sh

Major: 40
- Required courses
  - EN213 American Literature 3sh
  - EN220 Advanced Composition I 3sh
  - EN314 Speech and Communication in the Secondary English Classroom 3sh
  - EN318 Literature of Adolescents 3sh
  - EN323 Teaching Literature and Reading in the Secondary School 3sh
  - EN324 Teaching and Evaluating Writing 3sh
  - EN329 History of the English Language 1sh
  - EN330 Structure of English 3sh
  - EN341 Shakespeare 3sh
- Controlled electives:
  - Choose one Genre course: EN214, 215, 216, 217 3sh
  - Choose one British Literature Survey: EN211, 212 3sh
  - Choose one Theme course: EN372, 381, 348 3sh
  - Choose two additional courses from list: EN208, 211, 212, 214, 215, 216, 217, 221, 320, 322, 332, 333, 336, 348, 372, 381 6sh

Other Requirements: 0

Free Electives: 2-4

Total Degree Requirements: 124

( ) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."

Department of French

Robert L. Whitmer, Chairperson; Henry, Jones, Liscinsky, McCreary, Op de Beeck; and professor emeritus Fisel

The Department of French offers a varied curriculum designed to provide not only basic language instruction but also the more advanced competencies needed by language specialists and students hoping to take advantage of an international study experience. For the French major, the department has three degree programs: B.S. in Education (K-12), B.A. in Liberal Arts, and the B.A. in French for International Trade. The latter degree program provides solid undergraduate training preparatory to an M.B.A. in International Marketing and Finance.

Students majoring in French will acquire proficiency in all phases of the language and enter more deeply into the history, culture, and literature of Francophone countries. They will also gain some knowledge of the linguistic development of the language throughout the centuries. French majors generally find employment in government work, librarianship, journalism, foreign trade, airlines, tourism, business, and teaching. Students choosing careers as teachers will find the close supervision and advanced methodology offered by the department a distinct asset.

College Language Requirements

Students in the College of Humanities and Social Sciences and in the departments of the College of Natural Sciences and Mathematics must pass the intermediate sequence of a foreign language (FR201-FR202 or FR203) or demonstrate that they have somehow acquired the equivalent proficiency level. Students from the other colleges may choose to take French (201 and 202 or the accelerated 203) to fulfill a Liberal Studies elective. Any student who chooses French has an option to enroll in the traditional, three-credits-per-semester courses or the accelerated, six-credit track.

Placement/Exemption

The student with no previous French study will take FR101 (four credits) as a prerequisite. Students with previous French study will be placed into the appropriate course level by means of a written departmental exam administered in the summer for entering freshmen and during the first week of each term for other students. No student judged to be a native speaker of French will be allowed to enroll in any course below the 300 level, with the exception of FR254.

French for Elementary Education

A student in Elementary Education may elect a concentration of 18 semester hours of French, consisting of the following:

FR201-202	6sh
FR221-222	4sh
FR351-352	6sh
FR321-322	2sh

A student in Elementary Education interested in bilingual elementary teaching may, through special scheduling arrangements, increase the concentration in French to include foreign study and foreign child-centered internship experience.

Study Abroad—Nancy, France

ICP has established a study abroad center in Nancy, France. All majors are encouraged to participate in the Study Abroad Program, especially those seeking the International Trade Degree. Students have an option to participate in a full-year or one-semester program (spring). A six-week summer session has also been added to the options available. Nonmajors may be accepted into any of the programs but must enter the language courses offered in the Cours pour etrangers (Courses for Foreign Students). All credits are evaluated by the department as transfer credits. For further information regarding the cost and application procedures, contact the office of the dean of the college.

Internships

The Department of French, through contacts with certain French companies and through its affiliation with the ICN (Institut Commercial de Nancy), is able to place summer interns in Paris and other sites in France. The internship (generally six to twelve credits) is viewed as a highly desirable culminating experience following study in Nancy. For further information, contact the office of the dean of the college at least six months in advance.

Bachelor of Arts—French

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55

Liberal Studies electives: no courses with FR prefix

College: 0

Foreign Language (included in major)

Major: 36

Required courses:

FR201	College French I	3sh(1)
FR202	College French II	3sh(1)
FR221	French Conversation III	2sh
FR222	French Conversation IV	2sh
FR321	Advanced Conversation I	1sh
FR322	Advanced Conversation II	1sh
FR351	Advanced French Language I	3sh
FR352	Advanced French Language II	3sh
FR361	Development of French Culture and Literature I	3sh
FR362	Development of French Culture and Literature II	3sh

Controlled electives:

Other French electives:	12sh

Free Electives: 33-35

Total Degree Requirements: 124

(1) FR203 Accelerated College French will substitute for these courses.

Bachelor of Arts—French for International Trade

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 54-56

Mathematics: MA121

Social Science: EC121, PS101, PC101

Liberal Studies electives: MA214, no courses with FR prefix

College: 0

Foreign Language (included in major)

Major: 36

Required courses

FR201	College French I	3sh(1)
FR202	College French II	3sh(1)
FR221	French Conversation III	2sh
FR222	French Conversation IV	2sh
FR254	Civilization of Modern France	3sh
FR321	Advanced Conversation I	1sh
FR322	Advanced Conversation II	1sh
FR351	Advanced French Language I	3sh
FR352	Advanced French Language II	3sh
FR354	Business French	3sh
FR361	Development of French Culture and Literature I	3sh
FR362	Development of French Culture and Literature II	3sh

Controlled electives:

Two additional FR electives (advanced levels)	6sh(2)

Other Requirements: Business Sequence: 33

AD321	Business and Interpersonal Communications	3sh
AG201	Accounting Principles I	3sh
AG202	Accounting Principles II	3sh
BL235	Introduction to Business Law	3sh
EC122	Principles of Economics II	3sh
FI310	Finance I	3sh
IM300	Information Systems: Theory and Practice	3sh
MG311	Human Behavior in Organizations	3sh
MG360	Management and Production Concepts	3sh
MK320	Principles of Marketing	3sh
QB215	Business Statistics	3sh

Free Electives: 0-1

Total Degree Requirements: 124-125

(1) FR203 Accelerated College French will substitute for these courses.

(2) Most students earn additional language credits (up to 18) in semester or year abroad.

Bachelor of Science in Education—K-12 French Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55

Social Science: PC101

Liberal Studies electives: no courses with FR prefix

College: 30-33

Professional Education Sequence:

CM301	Technology for Learning and Instruction	3sh
ED242	Pre-student Teaching I	1sh
ED342	Pre-student Teaching II	1sh
ED441	Student Teaching	12sh
ED442	School Law	1sh
ED453	Teaching of Foreign Languages in the Secondary School	3sh(2)
EP202	Educational Psychology	3sh
EP377	Educational Tests and Measurement	3sh
FE202	American Education in Theory and Practice	3sh
EX300	Education of Exceptional Child	0-3sh(3)

Major: 33

Required courses:

FR201	College French I	3sh(1)
FR202	College French II (2)	3sh(1)
FR221	French Conversation III	2sh
FR222	French Conversation IV	2sh
FR321	Advanced Conversation I	1sh
FR322	Advanced Conversation II	1sh

FR351	Advanced French Language I	3sh
FR352	Advanced French Language II	3sh
FR361	Development of French Culture and Literature I	3sh
FR362	Development of French Culture and Literature II	3sh
Controlled electives:		
Other FR electives		9sh

Other Requirements: 0

Free Electives: 3-8

Total Degree Requirements: 124

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) FR203 Accelerated College French will substitute for these courses
(2) ED453 offered only in fall semester.
(3) May be fulfilled by examination in lieu of regular class.

Minor—French

21

Required courses:

FR201-202	College French I and II	6sh
FR221-222	French Conversation III and IV	4sh
FR351-352	Advanced French Language I and II	6sh
FR321-322	Advanced Conversation I and II	2sh
FR361	Development of French Culture and Lit I	3sh

Department of Geography and Regional Planning

Susan E. Forbes, Chairperson; Begg, Bencloski, Buckwalter, Miller, G. Sechrist, R. Sechrist, Shirey, Tepper; and professors emeriti Gault, Kulkarni, Payne, Weber

Geography has several traditions of study. Two of the more important traditions are the study of relationships between humans and environment or the ecological tradition and the study of spatial organization, which involves the way people use space on the earth's surface. In both traditions the focus is on understanding regions of the world and the interactions within and between them. Geographers make important contributions to the understanding of all aspects of humankind's use of and impact on the earth's surface.

Regional Planning involves preparing for the future. The demands and effects of a large and growing population require that land use, resource use, settlement patterns, transportation systems, and economic activity be planned. Regional planning is concerned with the social, locational, and environmental aspects of these planning decisions. In the 1990s, economic development has become an important focus.

Geography and Regional Planning are in the same department because "Planning is the art of which geography is the science." Employment opportunities for geographers and regional planners are good. Students will find a wide variety of positions in government, business, industry, planning, and education available. Environmental and locational knowledge gained in the department's programs provide skills needed in the job market. Students interested in obtaining additional career information should visit the departmental office in Room 2, Leonard Hall.

Three degree programs are offered by the department:
(1) Bachelor of Arts in Geography
(2) Bachelor of Science in Regional Planning
(3) Bachelor of Science in Social Science Education with a concentration in geography

A minor in geography is appropriate for majors in all other fields of the natural and social sciences. Students of business also find this minor relevant. A minor consists of a minimum of fifteen semester hours in geography. A student may elect any combination of courses for the minor. The department suggests that students take the core program if they anticipate doing graduate work in geography. Students might also consider concentrating in one of the areas of the field, such as physical/environmental, human/cultural, research and techniques, or regional geography.

Bachelor of Arts—Geography

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 54-55
Mathematics: MA217 recommended
Natural Science: GS101/102, 103/104 or GS121/122, 131/132
Liberal Studies electives: CO/IM/BE101, no courses with GE prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 36

Required courses		
GE230	Cultural Geography	3sh
GE241	Physical Geography	3sh
GE312	Research in Geography and Planning	3sh
GE411	Geography Thought and Philosophy	3sh
Controlled electives:		
One course from GE251-257		3sh
One course from GE313-314		3sh
Six courses (18cr) from any other GE courses		18sh

Free Electives: 27-34

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science—Regional Planning

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 54-55
Mathematics: MA217 recommended
Natural Science: GS101/102, 103/104, or GS121/122, 131/132
Social Science: PS111 recommended, EC121
Liberal Studies electives: CO/IM/BE101, no courses with GE prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 36

Required courses:		
GE312	Research in Geography and Planning	3sh
GE360	Introduction to Planning	3sh
GE361	Planning: Basic Study and Analysis	3sh
GE462	Planning: Development, Principles, and Theory	3sh
GE463	Planning: Design	3sh
GE464	Land Use Policy	3sh
Controlled electives:		
One course from GE313-314		3sh
Three courses from GE230, 231, 241, 331, 335, 336, 341, 342		9sh
Two courses from GE313 or 314, 332, 415, 440		6sh

Other Requirements: 15-36
Interdisciplinary minor (21sh) or
Minor in approved field (15-21sh)
Internship (GE498) strongly recommended

Free Electives: 0-19

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science in Education—Social Science Education/Geography Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55

Social Science: GE102, PC101, EC121
Liberal Studies electives: EC122, SO237, and AN271 or 272

College: 30
Professional Education Sequence
CM301 Technology for Learning and Instruction 3sh
ED242 Pre-student Teaching I 1sh
ED342 Pre-student Teaching II 1sh
ED441 Student Teaching 12sh
ED442 School Law 1sh
ED455 Teaching of Social Sciences in the Secondary School 3sh
EP202 Educational Psychology 3sh
EP377 Educational Tests and Measurement 3sh
FE202 American Education in Theory and Practice 3sh

Major: 24
Required courses
GE230 Cultural Geography 3sh
or
GE103 Human Geography 3sh
GE241 Physical Geography 3sh
Controlled Electives
At least one course from each of the following three groups:
Environmental Geography:
GE340 Geography of Fresh Water Resources 3sh
GE341 Climatology I 3sh
GE342 Physiography 3sh
GE440 Conservation: Environmental Analysis 3sh
Human Geography
GE231 Economic Geography 3sh
GE331 Population Geography 3sh
GE332 Urban Geography 3sh
GE333 Trade and Transportation 3sh
GE334 Political Geography 3sh
GE336 Social Geography 3sh
GE337 Historical Geography 3sh
GE431 Geography of American Indians 3sh
Philosophy, Tools, and Techniques:
GE213 Cartography I 3sh
GE312 Research in Geography 3sh
GE314 Map and Photo Interpretation 3sh
GE411 Geography: Thought and Philosophy 3sh
GE415 Remote Sensing 3sh
Two of the following regional geography courses 6sh
GE251 Geography of Pennsylvania 3sh
GE252 Geography of Latin America 3sh
GE253 Geography of Europe 3sh
GE254 Geography of USSR 3sh
GE255 Geography of Africa 3sh
GE256 Geography of East Asia 3sh
GE257 Geography of South and Southeast Asia 3sh
Geography Electives 3sh

Social science distribution requirements: 15-18
The following courses are required:
PS280 Comparative Government I 3sh
HI203 U.S. History for Historians 3sh
Plus one of the following options: 9-12sh
1) 6 additional hours in one social science field (history recommended) and three semester hours in another.
or
2) 9-12 additional hours in one social science field (history recommended), sufficient to meet the requirements for a minor.

Other Requirements: 0

Free Electives: (1) 0-14

(2) **Total Degree Requirements:** 124

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) If certain courses are chosen for Social Sciences major, they may also fulfill Liberal Studies requirements and permit additional free electives.
(2) Students who do not pass a special education competency exam must take EX300; this will increase graduation requirements to 126 credits.

Department of German

Jacob U. Voelker, Chairperson; Brode, Ready, Sommer, Sullivan

The Department of German offers three degree programs: the B.A. in German, the B.A. in German for International Trade, and the B.S. in Education in Secondary German Education.

While majoring in the German Department, students will acquire proficiency in all phases of the language and develop an understanding and appreciation of the history, culture, and literature of the German-speaking countries. They will also gain knowledge of the linguistic development of the language throughout the centuries. German majors may look forward to rewarding careers in teaching, government, journalism, foreign trade, tourism, business, and librarianship.

The degree program in German for International Trade provides an excellent way to combine language proficiency and cultural awareness in German with professional training in business. With this undergraduate background, students may enter M.B.A. degree programs and pursue careers in international business and trade. Study abroad for one or two semesters is strongly urged and is an integral part of the program. Qualified students may also choose to participate in internship programs with German-based corporations and financial institutions.

College Language Requirements

Students in the departments of the College of Natural Sciences and Mathematics and in the College of Humanities and Social Sciences must pass the intermediate sequence of a foreign language (GM251 and GM252) or demonstrate by the CLEP exam in German that they have acquired the equivalent proficiency level. Students from the other colleges may elect to take two courses in German at the intermediate (III/IV) level toward fulfilling the requirement for Liberal Studies electives. Any student who chooses German can meet the requirement through enrollment in the traditional, the accelerated, or the intensive six-credit track, which provides maximum opportunity for conversational practice in small groups under the direction of trained assistants.

Study Abroad

The Department of German encourages all students who study German at IUP to consider study abroad for one or two semesters. German majors are strongly urged to study two semesters or one academic year at a German university. To provide this opportunity at a relatively modest cost, the university has arranged an exchange of students between Duisburg University and IUP. By participating in this or other approved programs, students can earn from twelve to fourteen hours per semester. For further information regarding the cost and application procedures, contact the office of the dean of the college.

Minor in German

Students completing eighteen credits beyond GM 152 will be recognized as having minored in German. Nine of the twelve credits must be taken at the 300 level with only three credits from the conversation sequence, GM221, 222, 321, 322. This achievement will be noted on the student's transcript and thus provide more career flexibility.

Bachelor of Arts—German

Liberal Studies: As outlined in Liberal Studies section with the following specifications. 53-55
Liberal Studies electives: no courses with GM prefix

College: 0
Foreign language (included in major)

Major: 36
Required courses:
GM221 Conversation III 2sh
GM222 Conversation IV 2sh

GM321	Advanced Conversation I	1sh
GM322	Advanced Conversation II	1sh
GM251	German III	3sh
GM252	German IV	3sh(1)
GM351	Advanced German I	3sh
GM352	Advanced German II	3sh
GM361	Development of German Culture and Literature I	3sh
GM362	Development of German Culture and Literature II	3sh

Controlled electives:
Other GM electives (advanced levels) 9 or 12sh

Other Requirements: 0

Free Electives: 33-35

Total Degree Requirements: 124

(1) GM253 or GM254 may be substituted for GM252.

Bachelor of Arts—German for International Trade

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 54-56
Mathematics: MA121
Social Science: EC121
Liberal Studies electives: MA214, no courses with GM prefix

College: 0
Foreign language (included in major)

Major: 36

Required courses:

GM221	Conversation III	2sh
GM222	Conversation IV	2sh
GM321	Advanced Conversation I	1sh
GM322	Advanced Conversation II	1sh
GM251	German III	3sh
GM252	German IV	3sh
GM253	Intermediate Composition and Conversation	3sh
GM254	Business German	3sh
GM351	Advanced German I	3sh
GM352	Advanced German II	3sh
GM361	Development of German Culture and Literature I	3sh
GM362	Development of German Culture and Literature II	3sh

Controlled electives:
Two additional GM electives (advanced levels) 6sh(1)

Other Requirements: Business Sequence: 33

BL235	Introduction to Business Law	3sh
AD321	Business and Interpersonal Communications	3sh
AG201	Accounting Principles I	3sh
AG202	Accounting Principles II	3sh
EC122	Principles of Economics II	3sh
QB215	Business Statistics	3sh
IM300	Information Systems: Theory and Practice	3sh
FI310	Finance I	3sh
MG311	Human Behavior in Organizations	3sh
MG360	Management and Production Concepts	3sh
MK320	Principles of Marketing	3sh

Free Electives: 0-1

Total Degree Requirements: 124

(1) Most students earn additional language credits (usually 12-14) in semester study abroad.

Bachelor of Science in Education—Secondary German Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53-55
Social Science: PC101
Liberal Studies electives: no courses with GM prefix

College: 30
Professional Education Sequence

CM301	Technology for Learning and Instruction	3sh
ED242	Pre-student Teaching I	1sh
ED342	Pre-student Teaching II	1sh
ED441	Student Teaching	12sh
ED442	School Law	1sh
ED453	Teaching of Foreign Languages in the Secondary School	3sh
EP202	Educational Psychology	3sh
EP377	Educational Tests and Measurement	3sh
FE202	American Education in Theory and Practice	3sh

Major: 33
Required courses:

GM221	Conversation III	2sh
GM222	Conversation IV	2sh
GM321	Advanced Conversation I	1sh
GM322	Advanced Conversation II	1sh
GM251	German III	3sh
GM252	German IV	3sh(1)
GM351	Advanced German I	3sh
GM352	Advanced German II	3sh
GM361	Development of German Culture and Literature I	3sh
GM362	Development of German Culture and Literature II	3sh

Controlled electives:
Other GM electives 9sh

Other Requirements: 0

Free Electives: 6-8

Total Degree Requirements: 124

( ) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) GM253 may be substituted for or taken in addition to GM252.

Department of History

Neil B. Lehman, Chairperson; Bailey, Cashdollar, Fricke, Gallanar, Goodrich, Harris, Kadlubowski, King, Landon, Larner, Marcus, McDonough, Miller, Rife, Smith, Vogel, Wiley; and professors emeriti Cord, Ferguson, Gelbach, Hatfield, Mastro, Mervine, Moore, Oliver, Wahl

Programs in history are designed to give both those who major in history in the College of Humanities and Social Sciences and those who concentrate in history in the College of Education an opportunity to study in some depth the past story of peoples and their world. Degrees offered by the History Department are the Bachelor of Arts in History and the Bachelor of Science in Education with a major in Social Studies, concentrating in history. The first program is under the College of Humanities and Social Sciences, and the second is under the College of Education.

The history student will find that the program is excellent preparation for government service, for pre-law training, for broad business opportunities, for work in varied fields of journalism, for archival positions, and for teaching. Not only the story of the people of the United States but also that of other peoples is covered, in the belief that global historical understanding is essential for the future of mankind.

Requirements for the degree of Bachelor of Arts in History are thirty-three semester hours in history. Requirements for the degree of Bachelor of Science in Education with a major in Social Studies, concentrating on history, are a minimum of twenty-seven semester hours in history within the fifty-four semester hours required for social science certification. The requirement for a minor in history is 15 semester hours. For majors in history programs, courses in history in Liberal Studies are applicable only if numbered 300 or higher. Although there are no prerequisites to history courses, all programs should be

planned with an adviser. Every major and concentrate in history will be advised by history department staff members.

Admission to History 482 and 483, initiation in the local chapters of Phi Alpha Theta and Pi Gamma Mu, participation in study tours and study abroad programs, and other activities should be investigated by every history student. The department is committed to the idea of a broad liberal arts education.

Bachelor of Arts—History

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 50-52
- Liberal Studies electives: no courses with HI prefix
- Humanities-History: Fulfilled by required courses in major

College: 0-6
- Foreign Language Intermediate Level (1)

Major: 33
- Required courses:
  - HI200 Introduction to History 3sh
  - HI201 Western Civilization before 1600 3sh
  - HI202 Western Civilization since 1600 3sh
  - HI203 U.S. History for Historians 3sh
- Controlled Electives:
  - HI 480 Senior Seminar (2) 3sh
  - Non-Western HI course: Latin America, Africa, or Asia 3sh
  - Five additional history courses (3) 15sh

Other Requirements: 0

Free Electives: 33-41

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) This requirement may be fulfilled by completing the departmental honors program, or internship, or graduate seminar with a concluding paper in all cases.
(3) Courses selected from 300 and 400 level offerings.

Bachelor of Arts—History/Pre-law

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 50-52
- Liberal Studies electives: no courses with HI prefix
- Humanities-History: Fulfilled by required courses in major

College: 0-6
- Foreign Language Intermediate Level (1)

Major: 33
- Required courses:
  - HI200 Introduction to History 3sh
  - HI201 Western Civilization before 1600 3sh
  - HI202 Western Civilization since 1600 3sh
  - HI203 U.S. History for Historians 3sh
- Controlled electives:
  - HI480 Senior Seminar (2) 3sh
  - Non-Western HI course: Latin America, Africa, or Asia 3sh
  - Five additional history courses (3) 15sh

Other Requirements: Pre-law Interdisciplinary Minor 3-21
- Seven courses, including at least one from each of six areas:
  - Business: BL235, AG201, AG202
  - Criminology: CR210, CR260, CR357
  - Economics: EC121, EC122, EC332
  - English: EN213, EN220, EN310
  - Philosophy: PH101, PH222, PH450
  - Political Science: PS358, PS359, PS361

Free Electives: 12-32

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) This requirement may be fulfilled by completing the departmental honors program, internship, or graduate seminar with a concluding paper in all cases.
(3) Courses selected from 300 and 400 level offerings.

Bachelor of Science in Education—Social Science Education/History Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications 51-52
- Humanities-History: Fulfilled by required courses in major
- Social Science: PC101, EC121, and AN110
- Liberal Studies electives: EC122, GE230, and either SO237 or SO362; no courses with HI prefix

College: 30
- Professional Education Sequence:
  - CM301 Technology for Learning and Instruction 3sh
  - ED242 Pre-student Teaching and Clinical Experiences I 1sh
  - ED342 Pre-student Teaching and Clinical Experiences II 1sh
  - ED441 Student Teaching 12sh
  - ED442 School Law 1sh
  - ED455 Teaching of Social Sciences in the Secondary School 3sh
  - EP202 Educational Psychology 3sh
  - EP377 Educational Tests and Measurement 3sh
  - FE202 American Education in Theory and Practice 3sh

Major: (2) 27
- Required History courses:
  - HI200 Introduction to History 3sh
  - HI201 Western Civilization before 1600 3sh
  - HI202 Western Civilization since 1600 3sh
  - HI203 United States History for Historians 3sh
  - HI480 Senior Seminar in History 3sh
- Controlled History elective:
  - One course from the fields of Middle East, Africa, Asia, or Latin America at the 300 level or higher History electives: 3sh
  - Three history courses at the 300 level or higher, one to be from United States history 9sh

- Required Social Science distribution 9-12
  - GEXXX 200-level or higher Geography course 3sh
  - PS111 American Politics 3sh
  - PS280 Comparative Government I: Western Political Systems or 3sh
  - PS285 Comparative Government II: Non-Western Political Systems 3sh
  - SO231 Contemporary Social Problems 3sh(1)

Free Electives: 3-7

Total Degree Requirements: 124

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) SO231 required only if SO237 or SO362 are not taken as Liberal Studies electives.
(2) Eligibility for student teaching and certification in secondary social studies education (history concentration) requires a cumulative GPA of 2.75 and a grade of C or better in history courses and in the required social science distribution courses.

Department of Industrial and Labor Relations

James F. Byers, Chairperson; Gates, Gaylor, McPherson, Morand, Sedwick

The Department of Industrial and Labor Relations offers a graduate program within the College of Humanities and Social Sciences leading to the degree of Master of Arts in Industrial and Labor Relations. The forty-two-semester-hour program consists of a required core of twenty-seven semester hours, including an elective thesis and elective course offerings totaling fifteen semester hours. Internships are available and strongly encouraged.

The Industrial and Labor Relations program is multidisciplinary, combining analytical and human relations skills with knowledge drawn from social sciences and business disciplines. The degree is designed to prepare professional industrial and labor relations practitioners in public and private management, unions, neutral agencies, government agencies, and arbitration panels. It has as a special emphasis labor relations in the public sector.

While the department does not offer coursework leading to an undergraduate major or degree, it does offer several undergraduate courses which are open to students of any major or college.

Department of Journalism

Patricia Heilman, Chairperson; DeGeorge, Jesick, Mukasa, Russell, Truby; and professors emeriti Furgiuele, Swauger

Students interested in a career in news-editorial or public relations fields, with opportunities in such related areas as advertising, desktop publishing, and marketing, should enjoy this innovative, flexible program. The journalism major combines journalism elective courses, the student's choice of a variety of courses from other university departments, plus internships which provide on-the-job experience.

The IUP journalism major is flexible for the individual student, who decides, with an adviser, what directions his or her education will take for a mass communication career. The two sequences offered are News-Editorial and Public Relations.

A student wishing to enter the program becomes a journalism major in the College of Humanities and Social Sciences. Then, the student chooses an individual program within a large group of elective journalism courses, plus a much larger group of courses from various other areas of the university. A student who completes the major graduates with a B.A. in journalism. Because journalism itself covers all areas of life, the journalism major covers many areas of study preparation. There are only four required courses, so the student is free to mold the program to his/her own special interests through both major and free electives.

The journalism major will use journalism courses to fulfill the minimum of thirty hours required for the major. All journalism majors must complete the intermediate sequence of a foreign language. This may be done in one of three ways: by examination, by earning credit in third and fourth levels of a foreign language, or by completing four levels of a new language. If the last procedure is used, the two beginning foreign language courses may be applied as free electives to the total number of credits needed for graduation.

The Journalism Department offers an 18-credit minor designed to complement any major. Three 3-credit courses are required: JN105: Journalism and Mass media; JN106: Basic Journalistic Skills; and JN120: Journalistic Writing. The remaining nine credits may be taken from the following list of Journalism major courses: JN326, JN338, JN344, JN347, JN375, and designated Special Topics courses. Internship credits do not apply toward the 18-credit minor; however, a student in the minor program may take an internship and apply the credits as free electives.

Course Sequence

The journalism faculty offers the following operational policy for its course sequence and prerequisites. The basic idea is for students to take Level I courses prior to Level II courses, etc. We ask that special attention be given to course prerequisites to avoid scheduling students without proper experience into courses. We do retain flexibility of waiving sequence and prerequisites in individual cases.

Level I

JN105 Journalism and Mass Media (required for all journalism majors) If they have the prerequisites and if enrollment permits, nonmajors are welcome in JN105.
JN106 Basic Journalistic Skills (required for all journalism majors)
JN120 Journalistic Writing (required for all journalism majors)

Level II

JN337 Editing
JN321 Feature Writing
JN375 World News Coverage
JN343 History of the American Press
JN344 Issues and Problems
JN327 Layout, Design, and Production
JN338 News Analysis
JN326 Public Relations I
JN328 News Reporting (all majors)
JN345 Sports Journalism
JN349 Public Affairs Reporting
JN393 Document Design I
JN391 Presentation Making

Level III

JN346 Advanced Reporting
JN348 Editorial Page
JN323 Management
JN390 Public Relations II
JN394 Document Design II
JN347 Journalism Law
JN482 Independent Study
JN493 Internship
JN350 Advertising Writing
JN392 Problem Solving in PR

Minor Courses or Free Electives

A number of departments cooperate to make journalism study at IUP a very broad experience. These courses may be considered for dual major, a minor program(s), or as electives.

With the assistance of an adviser, a student may develop a program by choosing from the following electives. Electives shown here have pre-authorization. Any other elective requires adviser approval in writing.

Art: AR218, AR455
Business: AD101, AD321, DE333, MG300, MG401
Marketing: MK320, MK321, MK420, MK421, MK433
Communications Media: CM271, CM404, CM440, CM445, CM451
English: EN208, EN220, EN221, EN310, EN311, EN322
History: HI369, HI346, HI362, HI363, HI364
Philosophy: PH101, PH222, PH323
Political Science: PS111, PS251, PS280, PS285, PS351, PS353, PS354, PS359, PS370, PS371, PS356, PS361, PS362
Computer Science: CO101
Educational Psychology: EP304
Criminology: CR101, CR102, CR295
Economics: EC241, EC283, EC332, EC333
Psychology: PC310, PC320, PC330, PC371, PC420
Sociology: SO231, SO339, SO340, SO362, SO380

Bachelor of Arts—Journalism

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Liberal Studies electives: no courses with JN prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 30
Required courses:

JN105	Journalism and the Mass Media	3sh
JN106	Basic Journalistic Skills	3sh
JN120	Journalistic Writing	3sh
JN328	News Reporting	3sh

Controlled electives:
Other JN courses 18sh(2)

Other Requirements: 0
Department recommends a planned program of dual major, minor(s), or electives with special consideration of the preapproved courses listed. (3) (4)

Free Electives: 33-41

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) Maximum of 6 credits Internship applied to major.

(3) Students may take no more than 15sh outside the College of Humanities and Social Sciences without prior approval of adviser.
(4) Majors in the public relations sequence should make every effort to schedule MK320, MK433, and AD321.

Minor—Journalism (Implementation date: Fall, 1994)

Minor:

Required Courses:		
JN105	Journalism and Mass Media	3sh(1)
JN106	Basic Journalistic Skills	3sh(1)
JN120	Journalistic Writing	3sh(1)
Three controlled electives from following list		9sh
JN326, 338, 343, 344, 347, 375, 481		
Total (2)		18sh

(1) The above three courses are to be taken in sequence.
(2) Internship credits do not apply toward the 18-credit minor, however, a student in the minor program may take an internship and apply the credits as free electives.

Department of Philosophy and Religious Studies

Albert E. Bouffard, Chairperson; Begres, Boone, Bouffard, Caraway, Chan, Ferrara, Gibson, Liu, Mlecko, Montgomery, Schaub, Smith, Yirenkyi; and professors emeriti Hermann, Kannwisher

Philosophy

The program in philosophy is designed to provide the student with a capacity for thinking clearly, a critical attitude, and the ability to reason theoretically.

The major offers the background required for graduate work in philosophy. Those whose primary interests are in other disciplines will find philosophy courses which relate directly to their fields on a theoretical level. Both the minor and double major are especially desirable for their reflective benefits and because of the essentially interdisciplinary nature of philosophy.

Individually Designed Philosophy Minor

As a minor, philosophy has much to offer in helping individuals of various backgrounds better understand the fundamental assumptions of their disciplines. For that reason, the minor in Philosophy will be individually designed to meet special career needs and personal interests. Selection of courses will be accomplished through discussions with and approval of the department adviser. The minimum requirement for a minor is 15 semester hours with the restrictions on the major applying to the minor also. Students must expect careful planning in any program approved. For further explanation and suggestions, see departmental adviser.

Liberal Studies Offerings

The Philosophy program's Liberal Studies courses are all introductory in nature; none of them presupposes any philosophical background. The student may choose from the following: PH101: General Logic; PH120: Introduction to Philosophy; PH221: Introduction to Symbolic Logic; PH222: Ethics; PH223: Philosophy of Art.

Pre-Law Program

The Department of Philosophy and Religious Studies participates in the University Pre-Law Minor Program whereby a student majors in one of several academic disciplines including philosophy and also meets the pre-law minor requirements. Students interested in the philosophy major/pre-law minor should consult the departmental pre-law adviser. Philosophy courses included in the pre-law minor program are as follows: PH101: General Logic; PH222: Ethics; and PH450: Philosophy of Law.

Bachelor of Arts—Philosophy

Liberal Studies: As outlined in Liberal Studies section with the following specifications:		53-55
Liberal Studies electives: no courses with PH prefix		
College:		0-6
Foreign Language Intermediate Level (1)		
Major:		30
Required courses:		
PH324	History of Philosophy I: Ancient and Medieval	3sh
PH325	History of Philosophy II: Renaissance and Modern	3sh
PH405	Justice and Human Rights	3sh
PH420	Metaphysics	3sh
PH421	Theory of Knowledge	3sh
Controlled electives:		
One course from: PH101 or PH221		3sh
Four other PH courses (with restrictions)		12sh(2)
Other Requirements:		0
Free Electives:		33-41
Total Degree Requirements:		124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) No more than three 100-200 level courses may be counted toward the major. Only PH courses may be counted toward the major. Unless otherwise indicated in the Course Descriptions, all 300-400 level courses require junior or senior standing or permission of the instructor. This prerequisite applies both to Philosophy majors and to majors in any other discipline.

Bachelor of Arts—Philosophy/Pre-law

Liberal Studies: As outlined in Liberal Studies section with the following specifications:		53-55
Liberal Studies electives: no courses with PH prefix		
College:		0-6
Foreign Language Intermediate Level (1)		
Major:		30
Required courses:		
PH324	History of Philosophy I: Ancient and Medieval	3sh
PH325	History of Philosophy II: Renaissance and Modern	3sh
PH405	Justice and Human Rights	3sh
PH420	Metaphysics	3sh
PH421	Theory of Knowledge	3sh
Controlled electives:		
One course from: PH101 or PH221		3sh
Four other PH courses (with restrictions)		12sh(2)
Other Requirements: Pre-law Interdisciplinary Sequence		6-21
Seven courses, including at least one from each of six areas:		
Business: BL235, AG201, AG202		
Criminology: CR201, CR260, CR357		
Economics: EC121, EC122, EC332		
English: EN213, EN220, EN310		
History: HI320, HI321, HI346		
Political Science: PS358, PS359, PS361		
Free Electives:		12-29
Total Degree Requirements:		124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) No more than three 100-200 level courses may be counted toward the major. Only PH courses may be counted toward the major. Unless otherwise indicated in the Course Descriptions, all 300-400 level courses

require junior or senior standing or permission of the instructor. This prerequisite applies both to Philosophy majors and to majors in any other discipline.

Religious Studies

The Program in Religious Studies is designed to provide a balanced, nonsectarian, cross-cultural approach leading to a better understanding of the phenomenon of religion in human experience. It emphasizes an interdisciplinary approach by a) requiring religion-related courses outside Religious Studies and by b) encouraging the minor or a double major, rather than a single major in Religious Studies.

The program is valuable for those planning careers in religious education, religious journalism, or religious broadcasting. The program also provides an excellent background for graduates planning to enter Catholic, Jewish, or Protestant seminaries. Additionally, Religious Studies is a good complement to majors in such fields as Anthropology, English, Fine Arts, History, International Studies, Music, Philosophy, Political Science, Psychology, and Sociology. Religious Studies is one significant way to integrate course studies within the university curriculum.

In addition to the twenty-four semester hours of Religious Studies courses in the major, six semester hours must be taken from a number of courses offered by other departments which complement those offered in Religious Studies. Opportunity for interdisciplinary and cross-cultural study is implicit in the study of religious themes– and is required in the Religious Studies Program at IUP.

Minor

The requirements for a Minor in Religious Studies are 15sh.

a) 12sh must be taken from the Religious Studies offerings, which include certain required courses (see below).
b) 3sh must be taken outside the Religious Studies offering but in "religion-related" courses. Consult adviser in Religious Studies for choices.

Liberal Studies Offerings

The Religious Studies program's Liberal Studies courses are all introductory in nature; none presupposes any Religious Studies background. The student may choose from the following: RS100: Introduction to Religion; RS250: Understanding the Bible; RS290: Christianity.

Bachelor of Arts—Religious Studies

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Liberal Studies electives: no courses with RS prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 30
Controlled electives:(2)
One course from list A: RS100 or RS110 3sh
One course from list B: RS210 or RS250 3sh
One course from list C: RS370 or RS375 3sh
One course from list D: RS380, RS410, or RS440 3sh
Four additional RS courses(3) 12sh
Two courses from religion-related courses(3) 6sh

Other Requirements: 0

Free Electives: 33-41

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in the Liberal Studies electives.
(2) Other courses may be approved in consultation with adviser.
(3) Consult Religious Studies adviser.

Minor—Religious Studies

RS100 or 110 3sh
RS370 or 375 3sh
RS380 or 410 or 440 3sh
Elective in Religious Studies(1) 3sh
Religion-related course(1) 3sh

(1) Consult Religious Studies adviser.

Department of Political Science

David D. Chambers, Chairperson; Carone, Carranza, Dejene, Hirt, Keene, Morris, Palmer, Platt, Sitton; and professors emeriti Chaszar, Lee, Smith

Political scientists focus upon political systems, including the effect of environment on the system, inputs, the decision-making agencies which render binding public policies, and system outputs. Approaches to the study of government and politics include the normative approach, in which philosophical attention centers on values by asking the question "What ought to be?" and the behavioral approach, in which an attempt is made to develop verifiable theories through scientific methods by asking the questions "How" and "Why."

Students majoring in political science have employment opportunities in federal, state, and local governments and with private civic groups, interest groups, and political groups. Students who go on to graduate work find appointments at higher levels and in college teaching. Students graduating in political science, as in any of the social sciences, are in demand by employers in business and industry. Students completing the Political Science Internship Program have experienced considerable success in finding employment upon graduation. The political science major is also especially suitable for the pre-law student.

Degrees offered by the political science department are the Bachelor of Arts in Political Science, in Government and Public Service, and in Political Science Pre-Law. An interdisciplinary major and a minor in International Studies are sponsored by the Political Science Department. The department also offers a minor in political science.

Bachelor of Arts—Political Science

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Social Science: PS111
Liberal Studies electives: no courses with PS prefix

College: 0-6
Foreign Language Intermediate Level(1)

Major: 33
Required courses:
PS101 World Politics 3sh(2)
PS111 American Politics 3sh(3)
Controlled electives: 30sh
At least one course in three of first four areas:
American Studies: PS251, 300, 346, 350, 351, 353, 354, 355, 356, 357, 358, 359
Political Theory: PS360, 361, 362
Public Policy and Administration: PS250, 370, 371, 444
International Studies: PS280, 282, 283, 285, 320, 321, 380, 382, 383, 384, 385, 386, 387, 388, 389 (4)
General Political Science: PS300 (strongly recommended) PS377, 480, 481, 482, 485, 493

Other Requirements: 15-27
Second major, minor, or concentration as approved by adviser with maximum of 15 credits outside College of Humanities and Social Sciences unless specifically approved

Free Electives: 3-23

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

(2) PS101 satisfies non-Western requirement
(3) Credit for PS111 is counted in the Liberal Studies requirements.
(4) PS280 and/or PS285 recommended as prerequisite to PS380 through PS389

Bachelor of Arts—Political Science/Pre-Law

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Social Science: PS111
Liberal Studies electives: no courses with PS prefix

College: 0-6
Foreign Language Intermediate Level(1)

Major: 33
Required courses:
PS101 World Politics 3sh(2)
PS111 American Politics sh(3)
Controlled electives: 30sh
At least one course in three of first four areas.
American Studies: PS251, 300, 346, 350, 351, 353, 354, 355, 356, 357, 358, 359
Political Theory: PS360, 361, 362
Public Policy and Administration: PS250, 370, 371, 444
International Studies: PS280, 282, 283, 285, 320, 321, 380, 382, 383, 384, 385, 386, 387, 388, 389 (4)
General Political Science: PS300 (strongly recommended), PS377, 480, 481, 482, 485, 493

Other Requirements: Pre-law interdisciplinary minor 15-21
Seven courses, including at least one from each of six areas
Business: BL235, AG201, AG202
Criminology: CR210, CR260, CR357
Economics: EC121, EC122, EC332
English: EN213, EN220, EN310
History: HI320, HI321, HI346
Philosophy: PH101, PH222, PH450

Free Electives: 12-26

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) PS101 satisfies non-Western requirement.
(3) Credit for PS111 is counted in the Liberal Studies requirements
(4) PS280 and/or PS285 recommended as prerequisite to PS380 through PS389.

Bachelor of Arts—Government and Public Service

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Mathematics: MA 217
Social Science: EC121, PC101, SO151
Liberal Studies electives: CO101, no courses with PS prefix

College: 0-6
Foreign Language Intermediate Level(1)

Major: 39
Required courses:

PS111	American Politics	3sh
PS250	Public Policy	3sh
PS251	State and Local Political Systems	3sh
PS300	Research and Methods in Political Science	3sh
PS370	Introduction to Public Administration	3sh
PS371	Issues in Public Administration	3sh
PC330	Social Psychology	3sh
EC335	Public Finance	3sh(2)
EC336	State and Local Finance	3sh(2)
SO458	Political Sociology	3sh(3)

Controlled electives: 9sh
Three courses from list: PS350, 351, 352, 353, 354, 355, 358, 377, 444, 481, 482, 485, 493

Other Requirements: 21
One course from communications areas 3sh
(English, Journalism, Communications Media) as approved by adviser
Interdisciplinary minor 18sh
Government Management
Personnel Administration
Financial Administration
Planning

Free Electives: 3-11

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in the Liberal Studies electives.
(2) Approved substitutes for EC335 and EC336: EC283, 332, 333, 373.
(3) Approved substitutes for SO458: SO335, 345, 303.

Bachelor of Arts—Political Science/International Studies

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications.
Social Science: PS111
Liberal Studies electives: no courses with PS prefix

College: 0-6
Foreign Language Intermediate Level(1)

Major: 33
Required courses:
PS101 World Politics 3sh
PS111 American Politics *sh(2)
Interdisciplinary Sequence: 15sh(3)
Cultural specialization sequence 15sh(4)

Other Requirements: 0(5)

Free Electives: 30-38

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives. Only courses 300 level and beyond may count in the cultural specialization sequence.
(2) Credit for PS111 is included with Liberal Studies.
(3) The interdisciplinary sequence includes an introductory or comparative international course from each of five social science disciplines: anthropology, economics, geography, history, political science, and sociology. Selection depends on goal(s) of major and should be planned in consultation with the International Studies adviser.
(4) The specialization sequence focuses on one area or culture and three disciplines: economic systems, political systems, language, literature, history, geography. Currently three specializations are offered: Latin America, the Far East and Soviet Studies. Consult with adviser for planning course selection.
(5) Majors are strongly encouraged to take advantage of the study abroad opportunities available through IUP department programs and exchange opportunities available through the Center for International Studies.

Minor—Political Science

Minor 15
Required courses:
PS101 World Politics 3sh
PS111 American Politics 3sh
Controlled electives:
Three additional PS courses 9sh

Minor—International Studies

Minor 18

Required courses:

PS101	World Politics	3sh
PS111	American Politics	3sh (1)

Controlled electives:

Interdisciplinary sequence (see major) 15sh

(1) Credit counted with Liberal Studies Social Sciences

Department of Sociology

Herbert Hunter, Chairperson; Ackerman, Gondolf, Grant, Heckert, Holtz, Maracle, Nowak, Rawleigh, Reynolds, Sanderson, Snyder; and professor emeritus Newhill

The Sociology Department, which was a component of the Sociology/Anthropology Department, became a separate department effective July 1, 1993.

The Sociology Department seeks to develop both the scientific and humanistic foundations of sociology, to educate the wider community as to the significance of sociological knowledge, to apply sociological knowledge to current social problems, and to advance the profession by promoting the welfare of individuals and society. The discipline of sociology focuses primarily on the analysis of modern industrial societies by examining their basic patterns of social organization, the various changes that occur within these patterns, and the impact of the patterns on individual thought and action. Students are prepared for employment in human service fields or for graduate study in sociology or related fields.

Students majoring in sociology may select one of three tracks: general sociology, clinical sociology, and applied social research. The general track attempts to broadly educate those students who may wish to pursue graduate training in sociology and make sociology a career and profession. Because of its flexibility, it is also appropriate for students who want to pursue double majors that would include such fields as psychology or criminology. The general track gives students the broadest possible training in sociology. Students graduating with majors in general sociology are frequently in demand by employers in business, industry, and government.

The clinical track in sociology seeks to help students understand the causes of many of the problems that plague modern societies, such as poverty, racial discrimination, substance abuse, and domestic violence. It is designed to provide students with the knowledge and skills necessary to become practitioners in various human services (e.g., social work, juvenile counseling, medical sociology, gerontology).

The applied social research track emphasizes the development of research and assessment skills in students. Such skills are important in carrying out program assessments, needs assessments, program development, and other activities that focus on gathering, analyzing, and interpreting data important for policymakers.

The department also prepares teachers for secondary school social studies with a concentration in sociology. The program leads to the degree Bachelor of Science in Education. With its emphasis on patterns of social organization in modern industrialized societies, sociology provides a solid foundation for teaching social science at the secondary level. Minors are available in sociology and in applied social research.

Bachelor of Arts—Sociology/General Sociology Track

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Mathematics: MA217 recommended
Social Science: SO151
Liberal Studies electives: no courses with SO prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 27

Required courses:

SO151	Principles of Sociology	sh
SO320	Sociological Theory	3sh
SO380	Social Research Methods	3sh

One of the following courses

SO361	Social Stratification	3sh
SO362	Racial and Ethnic Minorities	3sh
SO363	Sociology of Sex and Gender	3sh

At least one *different* course from four of the following substantive areas: 12

Social Inequality and Social Change:

SO303	Social and Cultural Change	3sh
SO337	World Societies and World Systems	3sh
SO361	Social Stratification	3sh
SO362	Racial and Ethnic Minorities	3sh
SO363	Sociology of Sex and Gender	3sh
SO448	Social Policy	3sh
SO458	Political Sociology	3sh

Deviance and Social Problems

SO231	Contemporary Social Problems	3sh
SO333	Deliquency and Youth	3sh
SO335	Alcohol and Drug Abuse	3sh
SO427	Spouse Abuse	3sh
SO428	Child Abuse	3sh

Individual and Society

SO251	Sociology of Human Sexuality	3sh
SO345	Interpersonal Dynamics	3sh
SO357	Sociology of Aging	3sh

Social Organization and Institutions

SO286	Marriage, Kinship, and the Family	3sh
SO336	Sociology of the Family	3sh
SO339	The Community	3sh
SO340	Sociology of Industry	3sh
SO341	Sociology of Education	3sh
SO342	Social and Cultural Aspects of Health and Medicine	3sh
SO348	Sociology of Work	3sh
SO352	Sociology of Religion	3sh
SO421	Sociology of Mass Media	3sh
SO458	Political Sociology	3sh

Comparative Sociology

SO233	Language and Culture	3sh
SO271	Cultural Area Studies: Africa	3sh
SO272	Cultural Area Studies: China	3sh
SO273	Cultural Area Studies: Southeast Asia	3sh
SO286	Marriage, Kinship, and the Family	3sh
SO303	Social and Cultural Change	3sh
SO314	Native Americans	3sh
SO337	World Societies and World Systems	3sh
SO342	Social and Cultural Aspects of Health and Medicine	3sh

Free Sociology Electives: 6

Other Requirements: 0

Free Electives: 36-44

Total Degree Requirements: 124

( ) Credit counted in Liberal Studies.
(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Arts—Sociology/Clinical Sociology Track

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Mathematics: MA217 recommended
Social Science: SO151 required, AN110 and PC101 recommended
Liberal Studies electives: no courses with SO prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 42
Required courses:
SO151 Principles of Sociology 3sh
SO301 Clinical Sociological Theory 3sh
SO302 Clinical Sociological Practice 3sh
SO303 Social and Cultural Change 3sh
SO320 Sociological Theory 3sh
SO380 Social Research Methods 3sh
SO493 Internship in Sociology 12sh
Controlled electives: One substantive area (2) 15sh(3)
Medical Sociology: AN444 or SO342, and 4 courses from list: AN222, 444, BI151 or 155, EC335, FN212, PC321, 378, SO231, 336, 342, 357, 459
Gerontology: PC378 or SO357, and 4 courses from list: AN444, EC335, GE360, PC312, 378, SO231, 251, 336, 342, 352, 357
Juvenile Delinquency: CR451 or SO333, and 4 courses from list: CR102, 270, 370, 451, GE432, HI374, SO231, 333, 336, 339, 345, 361, 362
Interpersonal and Family Sociology: SO336 or 345, and 4 courses from list: HE218, 224, PC311, 321, 330, SO251, 335, 336, 339, 345, 361, 363, 427, 428
Labor and Industry: SO340 or 348, and 4 courses from list: EC330, 350, 371, 372, 373, HI373, LR426, 480, PC420, SO231, 303, 340, 348, 361, 458
Community Development: SO339, and 4 courses from list: AN271, 272, 314, EC336, 383, FN402, GE331, 332, 360, PS251, 354, SO231, 333, 336, 338, 339, 341, 363

Other Requirements: 0

Free Electives: 21-29

Total Degree Requirements: 124

( ) Credit counted in Liberal Studies.
(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) Students may create their own substantive area with the approval of the department chairperson.
(3) At least two courses in any substantive area must be SO (Sociology) courses

Bachelor of Arts—Sociology/Applied Social Research Track

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Mathematics: MA217
Social Science: SO151 required, AN110 recommended
Liberal Studies electives: BE/CO/IM101, no courses with SO prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 42
Required courses:
SO151 Principles of Sociology sh
SO320 Sociological Theory 3sh
SO380 Social Research Methods 3sh
SO456 Field Research Methods 3sh
SO457 Computer Use in Sociology 3sh
SO458 Political Sociology 3sh
SO471 Internship in Sociology 12sh
Controlled electives: One substantive area(2) 15sh(3)
Medical Sociology: AN444 or SO342, and 4 courses from list: AN222, 444, BI151 or 155, EC335, FN212, GE360, PC321, 378, SO231, 335, 336, 342, 357, 459
Gerontology: PC378 or SO357, and 4 courses from list: AN444, EC335, 360, GE360, PC312, 378, SO231, 251, 336, 342, 352, 357
Juvenile Delinquency: CR451 or SO333, and 4 courses from list: CR102, 270, 361, 370, 451, GE432, HI374, SO231, 333, 336, 339, 345, 361, 362
Interpersonal and Family Sociology: SO335 or 346, and 4 courses from list: AN319, HE218, 224, PC311, 321, 330, SO251, 335, 336, 337, 339, 345, 361, 362, 427, 428, 435
Labor and Industry: SO340 or 348, and 4 courses from list: EC330, 350, 371, 372, 373, HI373, LR426, 480, PC420, PS352, SO231, 303, 340, 348, 361, 458
Community Development: SO339, and 4 courses from list: AN271, 272, 314, EC336, 383, FN402, GE331, 332, 360, PS251, 354, SO231, 333, 336, 338, 339, 341, 363

Other Requirements: 0

Free Electives: 21-29

Total Degree Requirements: 124

( ) Credit counted in Liberal Studies
(1) Intermediate-level Foreign Language may be included in Liberal Studies elective
(2) Students may create their own substantive area with the approval of the department chairperson.
(3) At least two courses in any substantive area must be SO (Sociology) courses

Bachelor of Science in Education—Social Sciences Education/Sociology Concentration (*)

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications
Social Science: PC101, SO151, EC121
Liberal Studies electives: EC122, GE230, PS346

College: 30
Professional Education Sequence
CM301 Technology for Learning and Instruction 3sh
ED242 Pre-student Teaching I 1sh
ED342 Pre-student Teaching II 1sh
ED441 Student Teaching 12sh
ED442 School Law 1sh
ED455 Teaching of Social Sciences in Secondary School 3sh
EP202 Educational Psychology 3sh
EP377 Educational Tests and Measurement 3sh
FE202 American Education in Theory and Practice 3sh

Major: 39
Required Sociology or related courses
SO151 Principles of Sociology 3sh
SO231 Contemporary Social Problems 3sh
SO320 Sociological Theory 3sh
SO380 Social Research Methods 3sh
AN211 Cultural Anthropology 3sh
Controlled Electives 9sh
One course recommended from each of the following 3 areas of Sociology
Social Structures and Processes: SO336, 340, 341, 348, 352, 421, 458, 459
Social Problems: SO231, 251, 333, 335, 357, 362, 363, 427, 428
Theory and Research: AN317, 321, SO301, 456, 457
History Distributional Requirements
Any two History courses which focus on the U.S 6sh
Any Non-Western or World History Course 3sh
Required Social Science Distribution
GL200 level or higher 3sh
PS280 or PS285 3sh

Other Requirements: 0

Free Electives: (1) 3-4

(2) **Total Degree Requirements:** 124

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Students who do not pass a special education competency test must take EX300; this will reduce their free electives to 1sh.
(2) SO151 Principles of Sociology is counted as part of the 53-55sh Liberal Studies requirements.

Minor—Sociology 15

Required course
- SO151 Principles of Sociology 3sh

Controlled electives:
- One course from list: SO231, SO320, SO380 3sh
- Three additional courses in Sociology 9sh

Minor—Applied Social Research 15

Required courses:
- SO380 Social Research Methods 3sh
- SO456 Field Research Methods 3sh
- SO457 Computer Use in Sociology 3sh
- SO458 Political Sociology 3sh

Controlled elective:
- Any research course in College of Humanities and Social Sciences, as approved by department chairperson 3sh

Optional internship:
- AN493 or SO493 6sh

Department of Spanish and Classical Languages

Peter Broad, Chairperson; Carranza, Drescher, Foltz, Glisan, Hernandez, Mendizabal, Miltz, Smith, Spieker, Thornton, Torres-Rosado, Young

The Department of Spanish and Classical Languages offers a varied curriculum designed to provide not only basic language instruction in Spanish, Greek, and Latin but also the more advanced competencies needed by language specialists and students hoping to take advantage of an international study experience. For the undergraduate Spanish major, the department has three degree programs: the B.S. in Education, the B.A. in Spanish, and the B.A. in Spanish for International Trade. The latter degree program provides solid undergraduate degree training preparatory to an M.B.A. in International Management.

Students majoring in Spanish will acquire proficiency in all phases of the language and enter more deeply into the history, culture, and literature of Spanish-speaking countries. Spanish majors generally find employment in government work, librarianship, journalism, foreign trade, airlines, tourism, business, and teaching. Students choosing careers as secondary school teachers will find the close supervision and advanced methodology offered by the department a distinct asset.

College Language Requirements

Students in the College of Natural Sciences and Mathematics and College of Humanities and Social Sciences, who must pass an intermediate-level language course requirement for graduation, may choose any one of the four languages offered: French, German, Latin, and Spanish. Those choosing the Spanish or Latin options will fulfill the requirement by successfully completing SP 201 or SP 211 or LA 201. Self-instruction in Critical Languages fulfills the requirement only in the College of Humanities and Social Sciences. The student with no previous foreign language study will take SP101-102 or SP111 or LA101-102 as a prerequisite; the credits will not be applicable to any college or department requirements (except for students in HRIM who may fulfill their six-hour language requirement with SP111 or 211 or with two four-hour courses) but may be counted as general electives in the total required for graduation. Students in the other colleges may choose to take one of the languages offered (at the intermediate level) in fulfilling the requirements of Liberal Studies electives.

Students with previous Spanish study in high school will be placed into the appropriate course levels by means of a written departmental exam, administered prior to the beginning of the semester. In addition, as deemed necessary in individual cases, students may be required to take an oral proficiency test with one or more faculty members in the Spanish department. Each student's individual requirements and the judgment of the classroom instructors will also be considered in placement. No student judged to be a native speaker of Spanish will be allowed to enroll in any course below the 300-level.

Spanish for Elementary Education

A student in Elementary Education may elect a concentration of 19 semester hours of Spanish, consisting of the following:

- SP201 or equivalent 4sh
- SP221 Intermediate Conversation 3sh
- SP230 Intermediate Composition 3sh
- SP260 Introduction to Literature 3sh
- SP321 Advanced Conversation 3sh
- SP404 Advanced Spanish Grammar 3sh

Study Abroad and Internships

Study Abroad: The university has established study abroad centers in both Spain and Mexico. The program in Valladolid, Spain, is a second-semester-only program, whereas the one in Mexico is a summer program. All majors are encouraged to participate in study abroad; nonmajors are also accepted into these programs. The eighteen hours in Spain or six hours in Mexico are applicable to a major or a minor in Spanish. Students interested in more information should contact the Spanish department.

Internships: Internships in Spain and Mexico are available through the department. All internships take place during the summer and vary from six weeks to two months in duration. Internship is a credit-bearing course, SP493, and all interns are enrolled in the first session of summer school. Noncredit internships cannot be considered. Students enrolled in the Spanish for International Trade program are strongly urged to do an internship in order to gain credibility in the field of international business. Internships are available in banking, government, social work, communications, education, marketing, and many other fields. Arranging an internship abroad takes considerable long-range planning, and anyone interested should contact the Spanish Department at least three months in advance.

Bachelor of Arts—Spanish

Liberal Studies: As outlined in the Liberal Studies section with the following specifications: 53-55
- Liberal Studies electives, no courses with SP prefix

College:
- Foreign Language (included in major) 0

Major: 37

Required Courses:
- SP201 or equivalent 4sh
- SP221 Intermediate Conversation 3sh
- SP230 Intermediate Composition 3sh
- SP260 Introduction to Literature 3sh
- SP321 Advanced Conversation 3sh
- SP340 Hispanic Civilization through the 19th Century 3sh
- SP342/344 20th-Century Spain/20th-Century Spanish-America 3sh
- SP404 Advanced Grammar 3sh

Controlled Electives:
- At least one course from those numbered 410-431 3sh
- Any other nine (9) credits in courses 342 or above 9sh

Other Requirements: 0

Free Electives: 32-34

Total Degree Requirements: 124

Bachelor of Arts—Spanish for International Trade

Liberal Studies: As outlined in Liberal Studies section 54-56
with following specifications:
Mathematics: MA121
Social Science: EC121
Liberal Studies electives: GE252, MA214, CO/BE/IM101, no course with SP prefix

College: 0
Foreign Language (included in major)

Major: 34
Required courses:

SP201	or equivalent	4sh
SP222	Intermediate Conversation (Business)	3sh
SP230	Intermediate Composition	3sh
SP260	Introduction to Hispanic Literature	3sh
SP321	Advanced Conversation	3sh
SP340	Hispanic Civilization through the 19th Century	3sh
SP404	Advanced Grammar	3sh
SP342/344	20th-Century Spain/20th-Century Spanish-America	3sh
SP354	Commercial Spanish	3sh

Controlled Electives:
Other Spanish Electives 6sh

Other Requirements: Business Sequence 36

AD321	Business and Interpersonal Communications	3sh
AG201	Accounting Principles I	3sh
AG202	Accounting Principles II	3sh
BL235	Introduction to Business Law	3sh
EC122	Principles of Economics II	3sh
FI310	Finance I	3sh
IM300	Information Systems: Theory and Practice	3sh
MG310	Human Behavior in Organizations	3sh
MG330	Management and Production Concepts	3sh
MG495	Business Policy	3sh
MK320	Principles of Marketing	3sh
QB215	Business Statistics	3sh

Free Electives: 0

Total Degree Requirements 124-126

Bachelor of Science in Education—Secondary Spanish Education (*)

Liberal Studies: As outlined in Liberal Studies section 53-55
with the following specifications:
Social Science: PC101
Liberal Studies electives: no courses with SP prefix

College: 30
Professional Education Sequence

CM301	Technology for Learning and Instruction	3sh
ED242	Pre-Student Teaching and Clinical Experiences I	1sh
ED342	Pre-Student Teaching and Clinical Experiences II	1sh
ED441	Student Teaching	12sh
ED442	School Law	1sh
ED453	Teaching of Foreign Language in Secondary School	3sh
EP202	Educational Psychology	3sh
EP377	Educational Tests and Measurements	3sh
FE202	American Education in Theory and Practice	3sh

Major: 34
Required courses:

SP201	or equivalent	4sh
SP221	Intermediate Conversation	3sh
SP230	Intermediate Composition	3sh
SP260	Introduction to Hispanic Literature	3sh
SP321	Advanced Conversation	3sh
SP340	Hispanic Civilization	3sh
SP342/344	20th-Century Spain/20th-Century Spanish-America	3sh
SP353	Phonetics and Phonemics	3sh
SP404	Advanced Grammar	3sh

Controlled Electives:
Any other six (6) credits from SP 300 or above 6sh

Free Electives: (recommended) 6-8

ED499	Multicultural/Multiethnic Education	2sh
EX300	Education of Exceptional in Regular Classroom	3sh

Total Degree Requirements 124

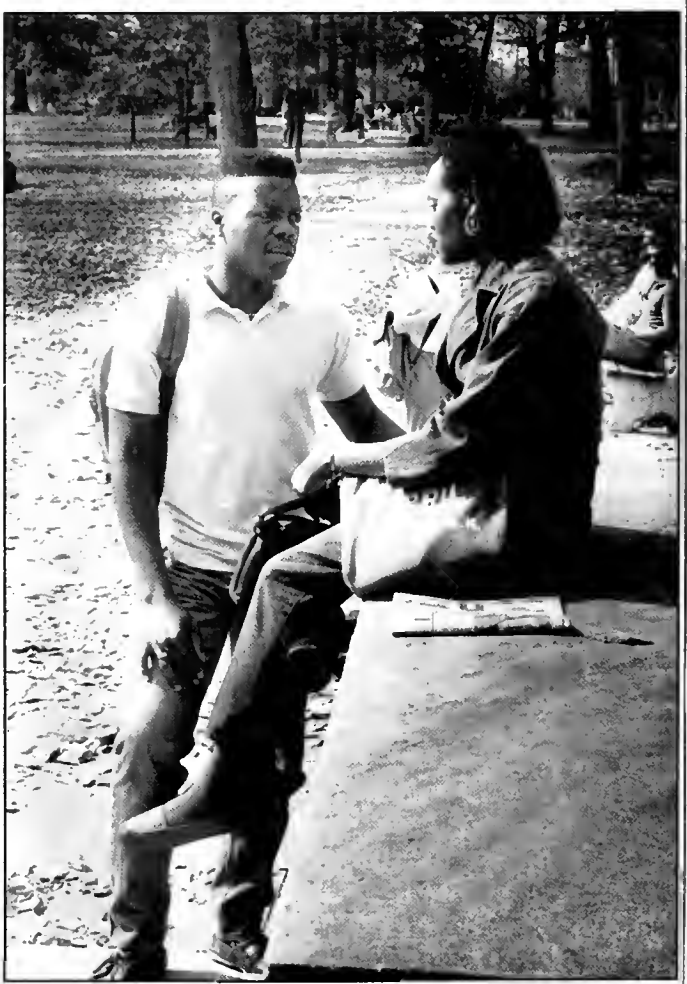
( ) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."

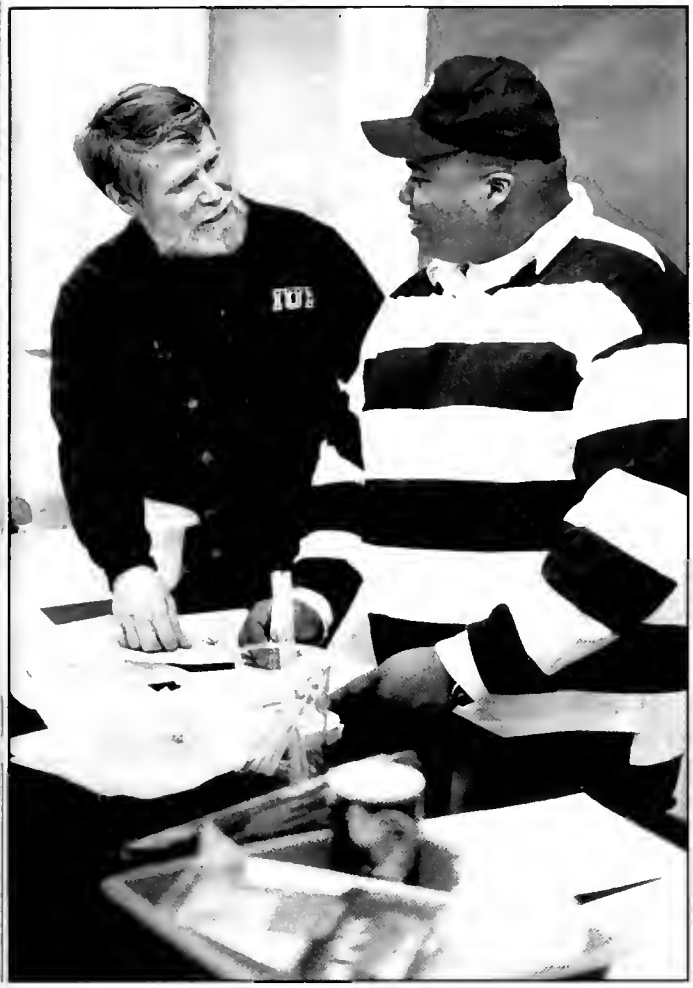
Minor—Spanish 22

Required courses:

SP201	or equivalent	4sh
SP221	Intermediate Conversation	3sh
SP230	Intermediate Composition	3sh
SP260	Introduction to Literature	3sh
SP321	Advanced Conversation	3sh
SP342/344	20th-Century Spain/20th-Century Spanish-America	3sh

Controlled electives:
One course: SP340, SP342, SP344, SP362, SP364, or SP353 3sh





The College of Natural Sciences and Mathematics

William G. Cale, Dean

One of the characteristics of the twentieth century is the marked change in the relation of citizens to their environment. Space probes, orbiting satellites, and productive research on the structure and synthesis of living matter have brought to the forefront for reexamination such time-honored queries as, "What is the nature of the universe?" or "Can people control their natural environment?" or "How did life begin?" Correct answers to these and other questions, coupled with proper application of this knowledge for humankind's betterment, must be a significant part of the goal of educated people everywhere.

The objectives of the College of Natural Sciences and Mathematics are to acquaint the student with the kinds of problems which lend themselves to possible solutions through the use of science; to introduce different scientific techniques through significant illustrative experiences; to give a sense of perspective in the development of science; and to develop an understanding of the basic community of all scientific disciplines.

Degrees

The departments of Biology, Chemistry, Computer Science, and Physics offer work leading to either a Bachelor of Science or a Bachelor of Arts degree, depending upon the specific course program pursued. The Bachelor of Science degree is awarded for successful work in the departments of Geoscience and Mathematics. The Bachelor of Arts degree is awarded by the Department of Psychology. A Bachelor of Sciences degree is also awarded in Natural Sciences.

Several departments in the College of Natural Sciences and Mathematics sponsor Master of Arts or Master of Science degrees in the university's Graduate School. The Department of Psychology offers the Doctor of Clinical Psychology degree. Information on these programs should be obtained from the Graduate School.

Degree Requirements

In addition to the university's Liberal Studies requirements, all students seeking a baccalaureate degree in the College of Natural Sciences and Mathematics must complete the requirements for a major as established by the department through which they wish to specialize. Statements of these requirements and for minoring in a specific field appear in the department sections that follow. A double major or minor may encompass a discipline outside as well as within the college but should be selected only with adviser approval. As a general principle, there is considerable latitude in course choice for Natural Sciences and Mathematics majors; for specifically required courses, substitution in any program must have the written approval of the student's department chairperson or the college dean. The intermediate series foreign language requirement (a description follows) applies without exception to all Natural Sciences and Mathematics degrees.

The Foreign Language Requirement

Unless otherwise indicated, each department adheres to the following foreign language requirement:

A candidate for a Bachelor of Arts or Bachelor of Science degree must demonstrate a proficiency in a foreign language equivalent to that attained upon completion of two years of college instruction in that language. This requirement may be met by
a. successful completion of the intermediate level in a specific language; or
b. successful completion of an exemption or credit examination in lieu of the above.

Any foreign student, registered as such at IUP, whose acquired native language is other than English and who demonstrates an acceptable proficiency in English, is exempt from the foreign language requirement for a Natural Sciences and Mathematics degree if the department he/she is majoring in does not require a specific language not thus covered.

Preprofessional Programs

The College of Natural Sciences and Mathematics offers preprofessional programs for the preparation of students for acceptance by a professional school: pre-dental, pre-medical (including osteopathic medicine), and pre-veterinary medicine. In addition, the college offers a major in the Natural Sciences for those students whose goal is pharmacy or pharmacology, optometry, podiatry, or similar professional field. All programs are so designed that, should work at a professional school not ensue, the student may earn an IUP baccalaureate degree, provided he/she has been faithful to faculty advisement.

The preprofessional health programs in Natural Sciences and Mathematics presuppose that the student has an excellent background in the high school sciences and mathematics or will prove to be an excellent college student. Because admission standards at most professional schools are very high, students desiring preprofessional preparation for any of these fields will find it advantageous to major in the basic department discipline, making known to the department chairperson their eventual goal but delaying explicit affiliation with the preprofessional program until they have established themselves academically at the college level. Commitment to any preprofessional program should be made no later than the end of the student's fourth semester.

Students interested in the related health fields (dentistry, pharmacy, optometry, physical therapy, podiatry, etc.) should consult with the college's natural sciences coordinator during their first semester of IUP attendance or as soon thereafter as possible.

Cooperative Programs

IUP has been fortunate to enter into cooperative agreements with a number of outstanding institutions to provide significant career opportunities to our students. These formal agreements provide for accelerated graduate or professional degree programs or carefully planned and coordinated undergraduate programming with the cooperating institution. Programs are intended to assure acceptance of properly qualified students by the cooperating professional schools. Additional information concerning the specific programs can be found under the appropriate academic department in this catalog.

Engineering (See Department of Physics)
Drexel University - the program combines the opportunity for two years of study at IUP with the remaining three years of study as part of the Drexel plan of cooperative education. A student completing this program will receive a bachelor's degree in engineering from Drexel University.

University of Pittsburgh - the program will allow the student to enroll at IUP for the first three years of college and conclude degree work by enrolling in an engineering program at the University of Pittsburgh for last two years. The student will earn a B.S. degree in Natural Science from IUP and the appropriate engineering degree from the University of Pittsburgh; see the Natural Science section for IUP degree requirements.

Family Medicine (See Department of Biology)
Jefferson Medical College of Thomas Jefferson University - the program is designed to increase the opportunities for IUP students to be admitted to Jefferson Medical College in the Family Medicine Program designed to provide physicians to rural communities in Pennsylvania where there is a shortage.

Forestry and Environmental Studies (See Department of Biology)
Duke University - the program is designed to coordinate the education of students from IUP with the graduate programs in forestry and environmental management offered at Duke University.

Podiatry (See Natural Sciences)
The Pennsylvania College of Podiatric Medicine program is designed to accelerate the professional training of IUP students in the field of podiatry.

Optometry (See Natural Sciences)
The Pennsylvania College of Optometry program is designed to accelerate the professional training of IUP students in the field of optometry.

Marine Science Consortium
College majors may be interested in the programs available through the Marine Science Consortium. The Marine Science Consortium was established in 1968 for the purpose of promoting teaching and research in the marine sciences. The participating institutions include IUP and thirteen other colleges and universities. Although no separate major in the Marine Sciences exists, elective courses may be taken and credited toward undergraduate curriculums in Biology, Geology, Geography, and Earth Science. The Marine Science Consortium offers five three-week sessions during the summer at the NASA-Wallops Island Station, Virginia. Normally, several research cruises are offered each summer.

Students must register for credit and pay credit fees to a participating institution. Room and board fees are paid to the consortium. Applications for all summer sessions must be submitted to the institutional director by April 1. Students must be accepted by the consortium before registering at a participating institution. See section on Marine Science Consortium for a listing of courses. For brochure, summer bulletin, and application forms, contact Dr. Ray L. Winstead, Biology, or Dr. Darlene S. Richardson, Geoscience, who are the IUP directors and assist students in program planning.

Internship Programs
Several departments have established programs under which students engage in an off-campus supervised work experience for credit.

For more information about specific Internship programs, students should consult with the chairperson of the department in which the student is majoring. Low-income students eligible for internships may receive federal-state funding.

Department of Biology

Roberst S. Prezant, Chairperson; Alico, Andrew, Ash-Johnson, Baker, Browe, Butler, Charnego, Ciskowski, Dietrich, Ferrence, Forbes, Gendron, Hulse, Humphreys, Kerans, Kesner, Linzey, Lord, Luciano, Nastase, Newell, Peard, Peterson, Pickering, Pistole, Schrock, Simmons, Winstead; and professors emeriti Gallati, Hoffmaster, Liegey, Moore, Stapleton

Degrees offered by the biology department are the Bachelor of Science in Biology, the Bachelor of Arts in Biology, Bachelor of Science in Environmental Health, and the Bachelor of Science in Education with a Biology major. The first three degree programs are under the College of Natural Sciences and Mathematics, and the fourth is under the College of Education. The department also offers a Biology minor.

The program leading to a B.S. in Biology is designed to provide maximum depth in the sciences and mathematics with minimum elective opportunity. Students who plan to attend graduate school or professional schools such as those in human or veterinary medicine most often choose this program of studies.

The program leading to a B.A. in Biology is designed to reduce the requirement in sciences and mathematics and allow for greater elective choice from diverse fields. Unspecialized career plans can be best accommodated with this program.

The Environmental Health program is a preparation for employment in local, state, and federal agencies and industry. Between the junior and senior year, each student should serve an internship with a governmental agency or an industrial concern.

The program leading to the B.S. in Education with a Biology major is designed to prepare for certification in public school teaching.

Note: The Biology Department cooperates in programs with Jefferson Medical College, Duke University School of the Environment, and Marine Science Consortium, Inc.

Duke Cooperative College Program in Forestry and Environmental Studies
The Cooperative College program with the Duke University School of the Environment is designed to coordinate the undergraduate education of students at IUP with graduate programs in the areas of resources and environment offered at Duke. Undergraduate majors in one of the natural sciences, mathematics, economics, business, or political science are suited to the program. Preparation for the Duke program should include at least one year each of biology with work in botany, economics with a significant component of microeconomics, and mathematics which should include calculus, computer science, and statistics. Applicants to the Duke program who have completed courses in ecology, chemistry, geology, physics, and a foreign language or additional courses in biology, economics, and mathematics will be given preferential consideration. Students are accepted in either of two degree programs at Duke: the Master of Forestry (M.F.) or Master of Environmental Management (M.E.M.).

Students may be accepted into the Duke graduate program after three years of high-quality undergraduate study at IUP or upon completion of the baccalaureate. Students who qualify after three years will have completed most of the undergraduate degree requirements at IUP except for total hours. Courses at Duke will be applied to the bachelor's degree at IUP. Dr. Gould F. Schrock, Department of Biology, is the faculty adviser at IUP and assists students in program planning.

Jefferson Medical College-IUP Physician Shortage Area Program
A cooperative Family Medicine Physician Education Program has been established by IUP and Jefferson Medical College of Thomas Jefferson University in Philadelphia for the purpose of improving the distribution of physicians in Pennsylvania. The program is designed to increase the opportunities for young women and men to practice family medicine in the rural communities of Pennsylvania where there is a shortage of physicians.

The program at Jefferson Medical College will admit approximately four graduates of IUP and twenty graduates of other colleges each year. Students from IUP will be admitted only if properly qualified according to the admission standards and policies of Jefferson Medical College. Applications are reviewed by the Joint IUP-Jefferson Subcommittee and recommendations made to the Jefferson Committee on Admissions.

Admission to Jefferson Medical College
A strong preparation in the sciences and mathematics basic to medical school studies is required. A variety of college course formats and combinations, including biology, general and organic chemistry, and physics is a minimum.

Courses taken to meet the basic requirements should be rigorous and, in general, comparable to courses accepted for concentration in these disciplines. Courses taken should be supplemented by laboratory experiences. Students may take upper-level science courses out of educational interest or to fulfill the requirements of their major. Taking additional science courses that cover material taught within the medical school curriculum is not helpful to gain admission.

Breadth of education is expected. Pursuit of some discipline in depth is encouraged. A successful medical student must actively acquire, synthesize, apply, and communicate information. These are skills which can be developed through a great variety of academic disciplines. Studies in the humanities and the social and behavioral sciences and development of effective writing skills are strongly suggested. Additional requirements for admission can be found in "Information for Prospective Students," published by Jefferson Medical College.

Students who qualify for the Physician Shortage Area Program (PSAP) must certify their intentions to adhere to the following plan of education and practice: (a) complete the family medicine curriculum during their four years of medical education at Jefferson Medical College, including a six-week clerkship in a rural area; (b) complete a three-year family medicine residency; and (c) agree to practice family medicine in an underserved area. Preference will be given to Pennsylvania residents who are interested in this program, with highest priority given to those who actually live, at the time of application, in the underserved area in which they hope to practice. (Dr. Allan Andrew, pre-medical adviser in the Biology Department, will assist students in program planning.)

In the programs of study that follow, no more than six semester hours in aggregate from internships, independent study, and special topics may be counted toward biology course requirements. Credits beyond six earned from these sources are counted as general electives.

Bachelor of Arts—Biology

Liberal Studies: As outlined in Liberal Studies section 55-56
with the following specifications:
- Mathematics: MA121
- Natural Science: CH111-112
- Liberal Studies electives: no courses with BI prefix

Major: 27

Required courses:

BI105	Cell Biology	4sh
BI110	Plant Biology	5sh
BI120	Animal Biology	5sh
BI263	Genetics	3sh
BI480	Biology Seminar	1sh

Controlled electives:

Biology electives (major courses only)	9sh(1)

Other Requirements: 8-14

Chemistry sequence

CH231	Organic Chemistry I	4sh
CH351	Biochemistry	4sh

Foreign Language Intermediate Level(2) 0-6sh

Free Electives: 27-34

Total Degree Requirements: 124

(1) No more than 6sh total from Independent Study, Special Topics, Internship applies to major; excess applied as free electives.
(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science—Biology

Liberal Studies: As outlined in Liberal Studies section 56-57
with the following specifications:
- Mathematics: MA121
- Natural Science: PY111/121-112/122
- Liberal Studies electives: MA122 OR MA216, no courses with BI prefix

Major: 33

Required courses:

BI105	Cell Biology	4sh
BI110	Plant Biology	5sh
BI120	Animal Biology	5sh
BI263	Genetics	3sh
BI480	Biology Seminar	1sh

Controlled electives:

Biology electives (major courses only)	15sh(1)

Other Requirements: 20-26

Chemistry sequence

CH111	General Chemistry I	4sh
CH112	General Chemistry II	4sh
CH231	Organic Chemistry I	4sh
CH232	Organic Chemistry II	4sh
CH351	Biochemistry	4sh

Foreign Language Intermediate Level(2) 0-6sh

Free Electives: 8-18

Total Degree Requirements: 124

(1) No more than 6sh total from Independent Study, Special Topics, or Internship applies to major; excess applied as free electives.
(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science in Education—Biology (*)

Liberal Studies: As outlined in Liberal Studies section 54-55
with the following specifications.
- Mathematics: MA217
- Natural Science: CH111-112
- Social Science: PC101
- Liberal Studies electives: PY111, no courses with BI prefix

College: 30

Professional Education Sequence:

CM301	Technology for Learning and Instruction	3sh
ED242	Pre-student Teaching Clinical Experience I	1sh
ED342	Pre-student Teaching Clinical Experience II	1sh
ED441	Student Teaching	12sh
ED442	School Law	1sh
ED451	Teaching Science in the Secondary Schools	3sh
EP202	Educational Psychology	3sh
EP377	Educational Tests and Measures	3sh
FE202	American Education in Theory and Practice	3sh

Major: (1) 30

Required courses:

BI103	General Biology I	4sh
BI104	General Biology II	4sh
BI110	Plant Biology	5sh
BI120	Animal Biology	5sh
BI361	Microbiology	3sh
BI480	Biology Seminar	1sh

Controlled electives:

Biology electives: (major courses only) BI105, BI263, and BI362 recommended	8sh(2)

Other Requirements: 13

Chemistry sequence:

CH231	Organic Chemistry I	4sh
CH351	Biochemistry	4sh

Physics sequence:

PY121	Physics Lab I	1sh
PY112	Physics II	3sh
PY122	Physics Lab II	1sh

Free Electives: 0

(#) **Total Degree Requirements:** 127-128

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."

(1) Eligibility for student teaching and certification in secondary biology requires a cumulative GPA of 2.75 and a grade of C or better in biology courses.
(2) No more than 6sh from Independent Study, Special Topics, Internship applies to major; excess applied as free electives.
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

Bachelor of Science—Environmental Health

Liberal Studies: As outlined in Liberal Studies section 56-57
with the following specifications:
Mathematics: MA121
Natural Science: PY111/121-112/122
Social Science: PS111
Liberal Studies electives: MA216, no courses with BI prefix

Major: 36
Required courses

BI105	Cell Biology	4sh
BI110	Plant Biology	5sh
BI120	Animal Biology	5sh
BI241	General Microbiology	3sh
BI362	Ecology	3sh
BI310	Applied Entomology and Zoonoses	3sh
BI321	Environmental Protection I	3sh
BI322	Environmental Protection II	3sh
BI480	Biology Seminar	1sh
BI498	Internship or Alternate Experience	6sh(2)

Other Requirements: 21-27
Required courses:

CH111	General Chemistry I	4sh
CH112	General Chemistry II	4sh
CH231	Organic Chemistry I	4sh
SA101	Introduction to Occupational Safety and Health Management	3sh
SA301	Nature and Effects of Occupational Health Hazards	3sh
SA302	Measurements and Evaluation of Occupational Health Hazards	3sh
Foreign Language Intermediate Level (1)		0-6sh

Free Electives: 4-11

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) No more than 6sh total from Independent Study, Special Topics, or Internship applies to major; excess applied as free electives.

Minor—Biology

Minor: 17
Option A: Required courses

BI103-104 General Biology I and II	8sh
Additional BI courses	9sh(1)

Option B: Required courses

BI105 Cell Biology	4sh
Additional BI courses	13sh(1)

Other Requirements:
Must have permission of biology department chairperson

(1) With approval of department chairperson

Biochemistry Program

Richard A. Hartline, Program Coordinator; Dietrich, Harding, Biology and Chemistry faculties.

The B.S. in Biochemistry is a four-year degree curriculum offered as a cooperative program by the Biology and Chemistry departments.

The curriculum leading to a B.S. in Biochemistry begins with foundation courses in biology, chemistry, mathematics, and physics in the first two years. Specialization in biochemistry commences in the third year with courses in biochemistry, genetics, physical chemistry, Special Topics in Biochemistry, and Biochemistry Seminar.

A unique feature of this undergraduate program is that Biochemistry research is a requirement. After consultation with faculty, the students will define a problem and devise an experimental plan through library research. Laboratory research will be done under the direct supervision of a Biology or Chemistry faculty member. Finally, the student will report on the results of the research in both written and oral forms.

The B.S. in Biochemistry Program is intended for those students whose interests lie in a most exciting field of modern science. Graduates of this program can expect to be qualified to enter graduate programs in biology and chemistry, professional schools in the health sciences, and positions in industrial and government research laboratories and in industrial production facilities.

Bachelor of Science—Biochemistry

Liberal Studies: As outlined in the Liberal Studies section 56-59
with the following specifications:
Mathematics: MA123
Natural Science: PY131/141-132/142
Liberal Studies elective: MA124, no courses with BC prefix; one course must be 200-level or higher

Major: 51
Required courses

BI105	Cell Biology	4sh
BI263	Genetics	3sh
BI361	Microbiology	3sh
BI401	Laboratory Methods in Biology and Biotechnology	3sh
BC301/311	Biochemistry I and Lab	4sh
BC302/312	Biochemistry II and Lab	4sh
BC480	Biochemistry Seminar I	1sh(1)
BC481	Special Topics in Biochemistry	3sh
BC482	Independent Research in Biochemistry	2sh
BC490	Biochemistry Seminar II	1sh(1)
CH113	Concepts in Chemistry	4sh
CH114	Basic Inorganic Chemistry	4sh
CH231	Organic Chemistry I	4sh
CH232	Organic Chemistry II	4sh
CH323	Analytical Methods	4sh
CH340	Physical Chemistry	3sh

Controlled Electives: 6-13

Advanced Biology course chosen from BI331, BI350, BI352, BI364, or BI453	3sh
Either MA216 or CO110	3-4sh
Foreign Language Intermediate Level(2)	0-6sh

Free Electives: 7-11

Total Degree Requirements: 124

(1) 1sh each semester of senior year.
(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Department of Chemistry

Pothen Varughese, Chairperson; Asting, Ballas, Bravo, Christodouleas, Coleman, Costa, Crumm, Elcesser, Fazio, Ford, Harding, Hartline, Kolaczkowski, Kupchella, Long, McKelvey, Patsiga, Scroxton, Syty, Wood, Woolcock, Zambotti; and professors emeriti Bordas, Marks, Tackett, Wunz

Degrees offered by the Department of Chemistry are the Bachelor of Science in Chemistry, the Bachelor of Arts in Chemistry, and the Bachelor of Science in Education with a Chemistry major. The first two degree programs are under the College of Natural Sciences and Mathematics, and the third is under the College of Education. The department also offers a Chemistry minor.

The B.S. in Chemistry is a professional degree and is accredited by the American Chemical Society. The student completing this major should be qualified to assume a position in industry or government as a chemist or to apply for admission to graduate school to pursue advanced studies leading to the M.S. or Ph.D. degree. The student considering going to a professional school who also wishes to complete this degree should elect appropriate courses as required by the professional school in addition to the courses required here. Those students who are particularly interested in biochemistry should elect a few selected biology courses.

The curriculum leading to the B.A. in Chemistry is designed to allow for the workable union of nonscience areas with chemistry in such a way as to retain the fundamental science and mathematics requirements needed for a career in chemistry. A careful selection of electives will qualify the student for entrance into many fields in which there is an acute need for educated people and, at the same time, satisfy the entrance requirements of various professional and graduate schools.

Some possible and useful combinations between chemistry and other disciplines would include chemistry-biology, chemistry-business administration, chemistry-computer science, chemistry-criminology, chemistry-government, chemistry-pre-dental, chemistry-pre-law, chemistry-pre-medicine, and chemistry-English (technical writing). The student must arrange a practical sequence of non-chemistry courses in consort with his/her adviser and the department chairperson concerned. A student seeking a career in forensic science should major in chemistry. The department also offers pre-medical programs in both the B.S. and B.A. curriculums. These programs prepare the student to satisfy the entrance requirements of medical schools.

The curriculum leading to the B.S. in Education with a Chemistry major is designed to prepare the student to teach chemistry at the secondary school level. Upon completion of the specified coursework and the requirements for teacher certification processes, the student is eligible for Pennsylvania certification by the Pennsylvania Department of Education.

Bachelor of Arts—Chemistry

Liberal Studies: As outlined in Liberal Studies section 56-57
with the following specifications:
Mathematics: MA121 or MA123
Natural Science: PY111/121-112/122 or PY131/141-132/142
Liberal Studies electives: MA122 OR MA124, no courses with CH prefix

Major: 29

Required courses:

CH113	Concepts in Chemistry	4sh
CH114	Basic Inorganic Chemistry	4sh
CH231	Organic Chemistry I	4sh
CH232	Organic Chemistry II	4sh
CH321	Quantitative Analysis	4sh
CH322	Instrumental Analysis	4sh
CH341	Physical Chemistry I	4sh
CH343	Physical Chemistry Laboratory I	1sh

Other Requirements: 15-21

Planned program in complementary field (adviser approval) with 6sh in 300/400 level courses (2)	15sh(1)
Foreign Language Intermediate Level	0-6sh

Free Electives: 17-24

Total Degree Requirements: 124

(1) Recommended fields: Biology, Business, Computer Science, Criminology, Dietetics, Economics, English, Foreign Language, Geoscience, Mathematics, Physics, Political Science, Psychology.
(2) Chemistry Pre-Med program requires BI105, BI120, BI263, BI331.
(3) Intermediate-level Foreign language may be included in Liberal Studies electives.

Bachelor of Science—Chemistry

Liberal Studies: As outlined in Liberal Studies section 56-57
with the following specifications:
Mathematics: MA123
Natural Sciences: PY131/141-132/142
Liberal Studies electives: MA124, no courses with CH prefix

Major: 44

Required courses:

CH113	Concepts in Chemistry	4sh
CH114	Basic Inorganic Chemistry	4sh(1)
CH231	Organic Chemistry I	4sh
CH232	Organic Chemistry II	4sh
CH301	Chemistry Seminar	1sh
CH321	Quantitative Analysis	4sh
CH322	Instrumental Analysis	4sh
CH341	Physical Chemistry I	4sh
CH342	Physical Chemistry II	3sh
CH343	Physical Chemistry Laboratory I	1sh
CH344	Physical Chemistry Laboratory II	1sh
CH410	Advanced Inorganic Chemistry Laboratory	1sh
CH411	Advanced Inorganic Chemistry	3sh

Controlled electives:

Additional Chemistry electives from list. CH302, CH303, CH331, CH335, CH351, CH376, CH412, CH421, CH441, CH498	6sh(2)

Other Requirements: 7-14

Additional math: CO110 and one additional course from MA171, MA227, MA241, MA342	7-8sh
Pre-Med program (3)	
Foreign Language Intermediate Level(4)	0-6sh

Free Electives: (5) 9-17

Total Degree Requirements: 124

(1) Those who took CH111 and CH112 should take CH116 for ACS certified B.S.
(2) CH498 (2sh) required for American Chemical Society certification.
(3) Chemistry/Pre-Med program requires BI105, BI120, BI263, BI331, BI352, and CH351.
(4) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(5) Pre-med requires Biology sequence 18sh.

Bachelor of Science in Education—Chemistry (*)

Liberal Studies: As outlined in Liberal Studies section 56-57
with the following specifications:
Mathematics: MA121
Natural Science: PY111/121-112/122
Social Science: PC101
Liberal Studies electives: MA122, no courses with CH prefix

College: 30

Professional education sequence:

CM301	Technology for Learning and Instruction	3sh
ED242	Pre-student Teaching Clinical Experience I	1sh
ED342	Pre-student Teaching Clinical Experience II	1sh
ED421	Student Teaching	12sh
ED442	School Law	1sh
ED451	Teaching Science in the Secondary School	3sh

EP202	Educational Psychology	3sh
EP377	Educational Tests and Measures	3sh
FE202	American Education in Theory and Practice	3sh

Major: 33-35

Required courses:

CH113	Concepts in Chemistry	4sh
CH114	Basic Inorganic Chemistry	4sh(1)
CH231	Organic Chemistry I	4sh
CH232	Organic Chemistry II	4sh
CH321	Quantitative Analysis	4sh
CH322	Instrumental Analysis	4sh
CH341	Physical Chemistry I	4sh
CH343	Physical Chemistry Laboratory I	1sh
CH498	Problems in Chemistry	1-2sh

Controlled electives:

One additional chemistry course from list	CH342, CH351, CH411	3-4sh

Other Requirements: 4

BI105	Cell Biology	4sh

Free Electives: 0-1

(#) **Total Degree Requirements:** 124-126

( ) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."

(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

(1) Those who took CH111 and CH112 should take CH116 for ACS certified B.S.

Minor—Chemistry

Minor: 20

Required courses:

CH111	General Chemistry I	4sh
CH112	General Chemistry II	4sh
CH231	Organic Chemistry I	4sh
CH232	Organic Chemistry II	4sh
One chemistry elective from CH321, CH323, CH351		4sh

Department of Computer Science

Gary L. Buterbaugh, Chairperson; Cross, Cunningham, Maple, McKelvey, Micco, Oblitey, Shubra, Sweeney, Watts, Wolfe; and professor emeritus Tompkins

The programs in Computer Science at IUP lead to the B.S. or B.A. degree and are designed primarily to prepare graduates for productive work in highly computer-dependent areas of business, government, and industry. In recent years, majors graduating from the program have attained their first jobs in business applications, programming and systems analysis, computer software development, scientific and applied mathematical programming, other computer-related areas, and graduate school.

In a rapidly developing field such as Computer Science, it is important that the graduate's education be broad and fundamental so that new trends can more readily be followed. Our goal is to balance fundamentality and breadth with sufficient supervised practice so that our graduates are productive at the time they graduate but ready and willing to change with the field.

Most applied computer scientists work in cooperation with professionals trained in other areas and with managers. Hence, the ability to work and communicate with others of different educational backgrounds is an important characteristic. To that end, we encourage Computer Science majors to take a strong minor (or area concentration) in a second area of interest. Some students may wish to double major. Majors in other disciplines at IUP are also welcome to take Computer Science courses for which they are qualified or a Computer Science minor.

Students majoring in Computer Science should set their goals beyond simple programming and should be preparing

1. to program well, both in design and implementation phases, and document what they have programmed
2. to analyze real-world problems in preparation for program design and implementation
3. to manage activities that are strongly computer dependent
4. to improve the tools that programmers and systems analysts use, i.e., to develop
   a. better machine systems
   b. better software systems
   c. better languages for communicating with machines
   d. better methods for solving intractable problems
5. to teach about computers at college or high school level
6. to advance the fundamental theory of digital information processors.

Bachelor of Arts—Computer Science

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 55-58

Mathematics: MA123 (or MA121-122 or 127)

Liberal Studies electives: MA216 (or MA214 or MA217), no courses with CO prefix

Major: 35

Required Courses

CO105	Fundamentals of Computer Science	3sh
CO110	Problem Solving and Structured Programming	3sh
CO220	Applied Computer Programming	3sh
CO300	Assembly Language Programming	3sh
CO310	Data Structures	3sh
CO315	Large File Organization and Access	3sh
CO380	Seminar on the Computer Profession	1sh
CO480	Seminar on Technical Topics	1sh

Controlled Electives. Select 9sh (1)

CO250	Introduction to Numerical Methods	3sh
CO319	Software Engineering Concepts	3sh
CO320	Software Engineering Practice	3sh
CO345	Data Communications	3sh
CO355	Computer Graphics	3sh
CO360	IBM Job Control Language	1sh
CO362	UNIX and C	3sh
CO481	Special Topics in Computer Science (as approved for majors)	1-4sh
CO485	Independent Study	1-4sh
CO493	Internship in Computer Science	12sh(2)

Upper Level Electives by Categories 6sh(3)

Computer Architecture: CO410
Theory of Languages: CO419, CO420, CO424, CO460
Systems Programming: CO430, CO432
Numerical Methods: CO450
Artificial Intelligence: CO405
Data Base Management: CO441

Other Requirements: 6-22

Additional Writing:

EN322	Technical Writing	3sh
Foreign Language Intermediate Level		0-6sh(4)
Additional Mathematics:		3-13sh(5)
MA123	Calculus for Physics and Chemistry (MA121 and MA122 or MA127 may be substituted)	
MA216	Probability and Statistics for Natural Sciences (MA363 and MA364, MA214 and MA417, or MA217 and MA417 may be substituted)	
MA219	Discrete Mathematics	

Free Electives 9-28

Total Degree Requirements: 124

(1) Select at least 9sh from the list of controlled electives and/or the list of upper-level electives. Note: Only 4sh of CO493 may be counted toward these 9sh.

(2) CO493 may be selected in either the second semester of the junior year or the first semester of the senior year. If CO493 is selected and approved, CO380 should be taken in the immediately preceding semester.

(3) Select at least two (2) additional courses, from at least two (2) different categories, from the list of upper-level electives.
(4) Foreign Language intermediate-level courses are counted as Liberal Studies electives.
(5) Any of the Mathematics options satisfy both the Learning Skill requirement, and one course may be counted as a Liberal Studies elective. The 3-credit minimum applies to students who take MA123 and MA216. The 13-credit maximum applies to students who take the MA121-122 calculus option and the MA363-364 statistics option.

Bachelor of Science—Computer Science/Applied Computer Science Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 54-58
Mathematics: MA123 (or MA121-122 or MA127)
Liberal Studies electives: MA216 (or MA214 or MA217), no courses with CO prefix

Major: 38

Required Courses

CO105	Fundamentals of Computer Science	3sh
CO110	Problem Solving and Structured Programming	3sh
CO220	Applied Computer Programming	3sh
CO300	Assembly Language Programming	3sh
CO310	Data Structures	3sh
CO315	Large File Organization and Access	3sh
CO319	Software Engineering Concepts	3sh
CO380	Seminar on the Computer Profession	1sh
CO441	Data Base Management	3sh
CO480	Seminar on Technical Topics	1sh

Select one (1) of the following two courses

CO320	Software Engineering Practice	3sh(1)
CO493	Internship in Computer Science	12sh(2)

Controlled Electives: Select 6sh (3)

CO250	Introduction to Numerical Methods	3sh
CO345	Data Communications	3sh
CO355	Computer Graphics	3sh
CO360	IBM Job Control Language	1sh
CO362	UNIX and C	3sh
CO481	Special Topics in Computer Science (only sections approved for majors)	1-4sh
CO485	Independent Study	1-4sh

Upper Level Electives by Categories: Select 3sh (4)
Computer Architecture: CO410
Theory of Languages: CO419, CO420, CO424, CO460
Systems Programming: CO430, CO432
Numerical Methods: CO450
Artificial Intelligence: CO405

Other Requirements: 6-22

Additional Writing:		
EN322	Technical Writing	3sh
Foreign Language Intermediate Level		0-6sh(5)
Additional Mathematics:		3-13sh(6)
MA123	Calculus I for Physics and Chemistry (MA121 and MA122 or MA127 may be substituted)	
MA216	Probability and Statistics for Natural Sciences (MA363 and MA364, MA214 and MA417, or MA217 and MA417 may be substituted)	
MA219	Discrete Mathematics	
Complete a minor from one of the following areas:		6-18
a)	From any department in the College of Natural Sciences and Mathematics	6-18sh
b)	From designated Business courses	18sh
c)	From designated Economics courses	15sh
d)	From designated Geography courses	15sh

Free Electives: 0-20

Total Degree Requirements: 124

(1) Credit for both CO320, Software Engineering Practice, and CO493, Internship in Computer Science, may be counted toward the degree but only one will be counted toward the major requirements.
(2) CO493 may be selected in either the second semester of the junior year or the first semester of the senior year. If CO493 is selected and approved, CO380 may be taken in the immediately preceding semester.
(3) Select at least 6sh from the list of controlled electives and/or the list of upper level electives.
(4) Select at least one (1) additional course from the list of upper level electives.
(5) Foreign Language intermediate-level courses are counted as Liberal Studies electives.
(6) Any of the Mathematics options satisfy both the Learning Skill requirement, and one course may be counted as a Liberal Studies elective. The 3-credit minimum applies to students who take MA123 and MA216. The 13-credit maximum applies to students who take the MA121-122 calculus option and the MA363-364 statistics option.

Bachelor of Science—Computer Science/Languages and Systems Track

Liberal Studies: As stated in Liberal Studies Requirements with the following specifications: 54-58
Mathematics: MA123 or MA127
Liberal Studies electives: MA124, no course with CO prefix

Major:

Required Courses 40

CO105	Fundamentals of Computer Science	3sh
CO110	Problem Solving and Structured Programming	3sh
CO220	Applied Computer Programming	3sh
CO300	Assembly Language Programming	3sh
CO310	Data Structures	3sh
CO315	Large File Organization and Access	3sh
CO319	Software Engineering Concepts	3sh
CO380	Seminar on the Computer Profession	1sh
CO410	Processor Architecture and Micro Programming	3sh
CO420	Modern Programming Languages	3sh
CO432	Introduction to Operating Systems	3sh
CO480	Seminar on Technical Topics	1sh

Controlled Electives: Select 9sh (1)

CO250	Introduction to Numerical Methods	3sh
CO320	Software Engineering Practice	3sh(2)
CO345	Data Communications	3sh
CO355	Computer Graphics	3sh
CO360	IBM Job Control Language	1sh
CO362	UNIX and C	3sh
CO405	Artificial Intelligence	3sh
CO419	Software Development and Ada	3sh
CO424	Compiler Construction	3sh
CO430	Introduction to Systems Programming	3sh
CO441	Data Base Management	3sh
CO450	Applied Numerical Methods	3sh
CO460	Theory of Computation	3sh
CO481	Special Topics in Computer Science (as approved for majors)	1-4sh
CO485	Independent Study	1-4sh
CO493	Internship in Computer Science	12sh(3)

Other Requirements: 13-21

Additional Writing:		
EN322	Technical Writing	3sh
Foreign Language Intermediate Level		0-6sh(4)
Mathematics: A minor in mathematics including the following courses		10-12sh(5)
MA123	Calculus I for Physics and Chemistry (127 may be substituted)	
MA124	Calculus II for Physics and Chemistry (MA128 may be substituted)	
MA171	Introduction to Linear Algebra	
MA216	Probability and Statistics for Natural Sciences (MA363 and MA364, MA214 and MA417, or MA217 and MA417 may be substituted)	
MA219	Discrete Mathematics	

Free Electives: 5-23

Total Degree Requirements: 124

(1) Select at least 9sh from the list of controlled electives. Note: Only 4sh of

CO493 may be counted toward these 9sh.
(2) Credit for both CO320, Software Engineering Practice, and CO493, Internship in Computer Science, may be counted toward the degree but only one will be counted toward the major requirements.
(3) CO493 may be selected in either the second semester of the junior year or the first semester of the senior year. If CO493 is selected and approved, CO380 may be taken in the immediately preceding semester.
(4) Foreign Language intermediate-level courses are counted as Liberal Studies electives.
(5) Credit for MA123/127 and MA124/128 counted in Liberal Studies.

Minor—Computer Science

Minor: 15

Required courses:
CO electives 15sh(1)

(1) No more than six credits may be from courses numbered 205 or lower.
(2) CO101 (see minor adviser for suggestions) Microbased Computer Literacy is an appropriate entry course for minors or for students who wish to take only one course.

Department of Geoscience

Frank W. Hall II, Chairperson; Cereone, Clark, Park, Richardson, Sutton, Taylor; and professor emeritus Prince

The Geoscience Department provides curriculums in areas of natural science dealing with and related to the earth and its environment by offering courses in astronomy, geology, meteorology, and oceanography.

In addition to on-campus instruction, opportunities exist for summer coursework and research in geology and oceanography at the Marine Science Consortium located at Wallops Island, Virginia.

Degrees offered by the Department of Geoscience are the Bachelor of Science in Geology, the Bachelor of Science in Environmental Geoscience, and the Bachelor of Science in Education with a major in Earth and Space Science or with a major in General Science. The first two degree programs are under the College of Natural Sciences and Mathematics, and the last two are under the College of Education.

The department also will act in an advisory capacity for students enrolled in the B.S. in Natural Science with concentrations in Astronomy, Meteorology, or Oceanography. These degree programs are designed to prepare students for graduate work in the aforementioned disciplines.

The B.S. degree in Geology is, in a sense, a dual-purpose degree program. Not only is it designed to graduate well-trained, competent geologists, able to compete for positions as professional geologists in the job market; it is also designed to provide the student with the necessary allied science and mathematics background to enable the good student to qualify for admission to the graduate school of his/her choice in Geology.

The B.S. degree in Environmental Geoscience offers the student a broad-based science background. In addition to a firm foundation in Geology-Geoscience courses, the student will also acquire a background in Biology and Chemistry. This will provide thorough training for the rapidly growing field of Environmental Geoscience, both for students who plan to pursue postgraduate training in this field and for those who plan to enter directly into jobs in federal and state agencies and private consulting firms.

The department recognizes as one of its functions the role of serving the field of public education by the preparation of qualified and certified teachers of earth and space science. Also, because of the interdisciplinary nature of both the department and the requirements for preparing general science teachers, the department administers the program designed to lead to general science certification and includes majors of that category as department members.

Minor in Geology

The minor in Geology consists of 17 semester hours. Required are GS121: Physical Geology/GS123: Intensive Physical Geology Lab and GS131: Historical Geology/GS133: Intensive Historical Geology Lab. Three upper-level (300 or higher) courses in geology (total 9 credits) will make up the remaining requirements for the minor in Geology totaling 17 credits.

Minor in Geoscience

The requirement for the minor in Geoscience will be 16 semester hours of geoscience, taken within the following framework. Students must complete one course in each discipline within the department: Astronomy, three semester hours; Geology, four semester hours (not GS122 or 132); Meteorology, three semester hours; Oceanography, three semester hours, for a total of thirteen semester hours. The additional three semester hours can be taken in any one of the aforementioned disciplines. Liberal Studies nonlaboratory courses, GS110, 141, 150, 151, and 221, will not be acceptable toward the minor in Geoscience.

Bachelor of Science—Geology

Liberal Studies: As outlined in Liberal Studies section with the following specifications 56-57
Mathematics: MA121
Natural Science: CH111-112
Liberal Studies electives: MA122, no courses with GS elective

Major: 36

Required courses: (1)

GS121	Physical Geology	3sh
GS123	Intensive Physical Geology Laboratory	1sh
GS131	Historical Geology	3sh
GS133	Intensive Historical Geology Laboratory	1sh
GS321	Mineralogy	3sh
GS322	Igneous and Metamorphic Petrology	3sh
GS325	Structural Field Geology I	3sh
GS330	Paleontology	3sh
GS362	Plate Tectonics	3sh
GS411	Sedimentary Petrology	3sh
GS480	Geoscience Seminar	1sh

Controlled electives:
Courses from list: GS310, 326, 327, 331, 332, 335, 336, 412, 420, 432, 440, 441, 481, 482, 493 9sh(2)

Other Requirements: 11-17

Additional Science:

PY111	Physics I Lec	3sh
PY112	Physics II Lec	3sh
PY121	Physics I Lab	1sh
PY122	Physics II Lab	1sh

One astronomy/meteorology/oceanography course from list: GS341, GS342, GS361, or GS371 3sh
Foreign Language Intermediate Level (3) 0-6sh

Free Electives: 14-21

Total Degree Requirements: 124

(1) Summer Field Camp in geology (5-9sh) is strongly recommended.
(2) A maximum of six credits from approved summer field camp may apply to controlled electives.
(3) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Minor—Geology

Minor: 17

Required courses:

GS121	Physical Geology	3sh
GS123	Intensive Physical Geology Laboratory	1sh
GS131	Historical Geology	3sh
GS133	Intensive Historical Geology Laboratory	1sh

Three upper-level (300 or higher) courses in Geology 9sh

Bachelor of Science—Environmental Geoscience

Liberal Studies: As outlined in Liberal Studies section 56-57
with the following specifications:
Mathematics: MA121
Natural Science: CH111 – CH112
Liberal Studies electives: MA122, no courses with GS prefix

Major: 21
Required courses:

GS121	Physical Geology	3sh
GS123	Intensive Physical Geology Laboratory	1sh
GS131	Historical Geology	3sh
GS133	Intensive Historical Geology Laboratory	1sh
GS310	Environmental Geology	3sh
GS325	Structural Geology	3sh
GS331	Hydrogeology	3sh
GS332	Geochemistry	3sh
GS480	Geoscience Seminar	1sh

Other Requirements: 31-38
Biology sequence:

BI105	Cell Biology	4sh
BI110 or 120	Plant or Animal Biology	5sh
BI321	Environmental Protection I	3sh
BI361	Microbiology	3sh

Chemistry sequence:

CH231	Organic Chemistry	4sh
CH323	Analytical Methods	4sh

Controlled electives: 8-9sh

BI272	Conservation of Plant/Animal Resources	3sh
BI322	Environmental Protection II	3sh
BI362	Ecology	3sh
CH232	Organic Chemistry II	4sh
CH340	Physical Chemistry for Biological Sciences	4sh
CO110	Problem Solving and Structured Programming	3sh
CO220	Applied Computer Programming	3sh
CO250	Introduction to Numeric Methods	3sh
CO310	Data Structures	3sh
GE314	Map and Photograph Interpretation	3sh
GE415	Remote Sensing	3sh
GS321	Mineralogy	3sh
GS326	Field Geology	3sh
GS432	Coal Geology	3sh
GS440	Subsurface Geology	3sh
PY111/121	Physics I Lecture and Lab	4sh(1)
PY112/122	Physics II Lecture and Lab	4sh

Foreign Language Intermediate Level (2) 0-6sh

Free Electives: 8-16

Total Degree Requirements: 124

(1) Students who plan to pursue an advanced degree in environmental geoscience are strongly advised to take the physics sequence as their controlled electives.
(2) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Minor—Geoscience

Minor: 16
Required courses:
One course from each of the following:

Astronomy (not GS110)	3sh
Geology (not GS122 or 132)	4sh
Meteorology	3sh
Oceanography	3sh

Additional 3sh from one of the above fields (300 level or higher) 3sh

Bachelor of Science in Education—Earth and Space Science (*)

Liberal Studies: As outlined in Liberal Studies section 55-56
with the following specifications:
Mathematics: MA121
Natural Science: CH111-112
Social Science: PC101
Liberal Studies electives: BE/CO/IM101, no courses with GS prefix

College: 30
Professional Education Sequence

CM301	Technology for Learning and Instruction	3sh
ED242	Pre-student Teaching Clinical Experience I	1sh
ED342	Pre-student Teaching Clinical Experience II	1sh
ED451	Teaching Science in the Secondary Schools	3sh
ED441	Student Teaching	12sh
ED442	School Law	1sh
EP202	Educational Psychology	3sh
EP377	Educational Tests and Measurements	3sh
FE202	American Education in Theory and Practice	3sh

Major: 39
Required courses:

BI311	Environmental Biology	4sh
GS121	Physical Geology	3sh
GS123	Intensive Physical Geology Laboratory	1sh
GS131	Historical Geology	3sh
GS133	Intensive Historical Geology Laboratory	1sh
GS341	Solar System	3sh
GS342	Stellar Astronomy	3sh
GS350	Operation of the Planetarium	1sh
GS361	Oceanography	3sh
GS371	Meteorology I	3sh
PY111	Physics I Lec	3sh
PY112	Physics II Lec	3sh
PY121	Physics I Lab	1sh
PY122	Physics II Lab	1sh

Controlled electives:
Geology electives (not GS110, 141) 6sh

Other Requirements: 0

Free Electives: 0

Total Degree Requirements: 124-125

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."

Bachelor of Science in Education—General Science Education (*)

Liberal Studies: As outlined in Liberal Studies section 55-56
with the following specifications:
Mathematics: MA121
Natural Science: CH111-112
Social Science: PC101
Liberal Studies electives: BE/CO/IM101, no courses with prefix of chosen track in major

College: 30
Professional Education Sequence

CM301	Instructional Media	3sh
ED242	Pre-student Teaching Clinical Experience I	1sh
ED342	Pre-student Teaching Clinical Experience II	1sh
ED451	Teaching Science in the Secondary Schools	3sh
ED441	Student Teaching	12sh
ED442	School Law	1sh
EP202	Educational Psychology	3sh
EP377	Educational Tests and Measurements	3sh
FE202	American Education in Theory and Practice	3sh

Major: 36
Required courses:

BI103	General Biology I	4sh
BI104	General Biology II	4sh
GS101	Earth Science: Geology and Oceanography	3sh
GS102	Earth Science: Geology and Oceanography Lab	1sh
GS103	Earth Science: Meteorology and Astronomy	3sh
GS104	Earth Science: Meteorology and Astronomy Lab	1sh
PY111	Physics I Lec	3sh
PY112	Physics II Lec	3sh
PY121	Physics I Lab	1sh
PY122	Physics II Lab	1sh

Controlled electives: One track 12sh
Biology track: BI110 or 120, 272, 480, BI elective
Chemistry track: CH231, 321, 322 or 341 or 351
Geoscience track: GS341 or 342, 121, 361, 371
Physics track: PY222, 231, 242, 331 (1)
One additional science course

Other Requirements: 0

Free Electives: 2-3

Total Degree Requirements: 124

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."
(1) Note: If Physics track is elected, MA123 and MA124 are required

Department of Mathematics

Gerald M. Buriok, Chairperson; Alarcon, Anderson, Angelo, Balenovich, Bertness, Broughton, Burkett, Busovicki, A. Davis, Donley, Dubovsky, Duncan, Early, Feldman, D. Frank, Gorman, Maderer, Massey, R. McBride, Mitchell, Morgan, J. Myers, Ray, Reber, Rettig, D. Shafer, Shawer, Shepler, Speakman, Steelman, Stempien, G. Stoudt, R. Stoudt, M. Woodard; and professors emeriti Arms, Gibson, Hartman, Hoyt, McBride, Morrell, Mueller, Oakes, E. Smith, W. Smith, Stilwell, Willison

The Mathematics Department prepares students for work in industry, graduate school mathematics, and teaching. Degrees offered by the department are the Bachelor of Science in Mathematics, the Bachelor of Science in Applied Mathematics, and the Bachelor of Science in Education with a Mathematics major. The first two degree programs are offered within the College of Natural Sciences and Mathematics, and the third is with the College of Education. The department also offers a minor in Mathematics and a minor in Applied Statistics. The program for a mathematics major in the College of Natural Sciences and Mathematics is two-phased. A student may pursue a degree in Applied Mathematics or Mathematics. Those completing a degree in Mathematics will be prepared to continue their studies in mathematics in graduate school, though some may enter business, industry, or government service. Those students receiving a degree in Applied Mathematics will be primarily prepared to enter business, industry, or government service in an area where mathematics or computer science is used or to continue their studies in applied mathematics or computer science in graduate school. This student would not be expected to continue graduate studies in pure mathematics.

The program leading to the B.S. in Education with a Mathematics major prepares the student for teaching mathematics in junior or senior high school. Many graduates, however, continue their formal education in mathematics at the graduate level or work in government or industry.

Elementary education majors may elect to take a concentration of at least fifteen hours in mathematics. The program of courses for this concentration is as follows: in addition to MA151 and MA152, select nine hours from the following courses: MA317, MA420, MA450, MA456, MA457, MA458, MA459, MA471, or MA483.

Minor in Mathematics

The minor in Mathematics consists of a minimum of seventeen (17) semester hours in mathematics. The minor in Mathematics may offer preparation for advanced study in areas such as Economics, Computer Science, Physics, and other natural sciences. Any student who is required to take a year of calculus should consider this minor.

Minor in Applied Statistics

The minor in Applied Statistics may be of interest to students who are required to take a calculus course and a course in probability and statistics. This includes, but is not limited to, students in the College of Business, Safety Science majors, and Computer Science majors.

A cumulative QPA of at least 2.0 in MA courses is required for a minor in Mathematics or Applied Statistics. The Mathematics Department will not certify a minor for a transfer student unless at least two (2) of the courses counting for the minor have been completed in the IUP Mathematics Department.

Bachelor of Science—Applied Mathematics

Liberal Studies: As outlined in Liberal Studies section 50-52
with the following specifications:
Mathematics (included in major)
Liberal Studies electives: no courses with MA prefix

Major: 40-41
Required courses

MA127	Calculus I	4sh
MA128	Calculus II	4sh
MA171	Introduction to Linear Algebra	3sh
MA216	Probability and Statistics for Natural Science	4sh
MA227	Calculus III	4sh
MA241	Differential Equations	3sh
MA271	Introduction to Algebraic Structures	3sh

Controlled electives
Two courses from list 6sh
MA371, 421, 422, 423, 424, 427, 476, 477
One of the following two-course sequences 6-7sh
MA342/CO450, MA363/MA364, MA445/MA446
A minimum of three additional semester hours from the list of controlled electives above or the following: 3sh
MA353, 425, 447, 465, 481

Other Requirements: 6-12
Computer Science:

CO110	Problem Solving and Structured Programming	3sh
CO250	Introduction to Numerical Methods	3sh

Foreign Language Intermediate Level (1) 0-6sh

Free Electives: 19-28

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) A student may select courses to fulfill requirements for specialized track.
a. Actuarial/Statistics: MA363, 364, 421, 422, 446, 465
b. Scientific/Engineering: MA241, 342, 363, 364, 371, 423, 445,446
c. Math Analyst: MA241, 342, 363, 364, 371, 445 or 446, 476, CO minor.

Bachelor of Science—Mathematics

Liberal Studies: As outlined in Liberal Studies section 50-52
with the following specifications:
Mathematics (included in major)
Liberal Studies electives: no courses with MA prefix

Major: 40-41
Required courses

MA127	Calculus I	4sh
MA128	Calculus II	4sh
MA171	Introduction to Linear Algebra	3sh

MA216	Probability and Statistics for Natural Science	4sh
MA227	Calculus III	4sh
MA241	Differential Equations	3sh
MA271	Introduction to Algebraic Structures	3sh

Controlled electives:

Four courses from list: 12sh
MA371, 421, 422, 423, 424, 427, 476, 477

A minimum of three additional semester hours from the list of controlled electives above or the following MA342, 350, 353, 355, 363, 364, 425, 445, 446, 447, 465, 481 — 3-4sh

Other Requirements: 3-9

Computer Science

CO110	Problem Solving and Structured Programming	3sh

Foreign Language Intermediate Level (1) 0-6sh

Free Electives: 22-31

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives

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Bachelor of Science in Education—Mathematics Education (*)

Liberal Studies: As outlined in Liberal Studies section 50-52
with the following specifications

Mathematics: (included in major)
Social Science: PC101
Liberal Studies electives: no courses with MA prefix

College: 30

Professional Education Sequence:

CM301	Technology for Learning and Instruction	3sh
ED242	Pre-student Teaching Clinical Experience I	1sh
ED342	Pre-student Teaching Clinical Experience II	1sh
ED441	Student Teaching	12sh
ED442	School Law	1sh
ED456	Teaching Mathematics in the Secondary Schools	3sh
EP202	Educational Psychology	3sh
EP377	Educational Tests and Measurements	3sh
FE202	American Education in Theory and Practice	3sh

Major: 35-39

Required courses:

MA117	Principles of Math	3sh
MA171	Introduction to Linear Algebra	3sh
MA271	Introduction to Algebraic Structures	3sh
MA353	Theory of Numbers	3sh
MA355	Foundations of Geometry I	3sh
MA350	History of Mathematics	2sh
MA460	Computers/Calculators in Secondary School	3sh
MA452/453/454	Math Seminar	1sh

One Calculus sequence: (A or B)

A.	MA127	Calculus I	4sh(1)
	MA128	Calculus II	4sh
	MA227	Calculus III	4sh
B	MA123	Calculus I for Physics/Chemistry	4sh
	MA124	Calculus II for Physics/Chemistry	4sh

One Statistics sequence: (A or B)

A.	MA363	Mathematical Statistics I	3sh(1)
	MA364	Mathematical Statistics II	3sh
B.	MA216	Probability/Statistics for Natural Science	4sh

Other Requirements: 3

CO205	Programming Languages for Secondary Schools	3sh

Free Electives: 0-6

Total Degree Requirements: 124

(*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."

(1) If neither Option A has been chosen, then one of MA371, MA421, MA476, MA445 is required

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Minor—Applied Statistics

The minor in Applied Statistics consists of seventeen (17) semester hours in Mathematics selected as follows:

(a) Introductory calculus course: MA121, MA123, or MA127
(b) Introductory statistics course: MA214, MA216, or MA217
(c) MA417
(d) MA418

The remaining hours may be chosen from the following:

(a) a second calculus course: MA122, MA124, or MA128
(b) MA171
(c) Any course for mathematics majors approved by the Applied Statistics Adviser

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Minor—Mathematics

Required courses 17sh
MA121 and 122 or
MA123 and 124

Controlled electives 9sh(1)
Other courses for math majors, MA216 and MA219 may be included

(1) The following courses are excluded: MA100, MA101, MA102, MA110, MA117, MA214, MA217, MA417, and MA418

Natural Science

John Fox, Coordinator

The program leading to the Bachelor of Science degree in Natural Science is designed to prepare students for early admission to professional schools—optometry, podiatry, chiropractic, physical therapy, pharmacy, and dentistry. Several tracks prepare students for further study in astronomy, engineering, meteorology, or oceanography. The B.S. degree in Natural Science is earned by students who transfer to professional schools that have an articulation agreement with IUP. Students interested in obtaining a four-year baccalaureate degree before entering a medical or professional school should enroll in a program of studies leading to a B.A. or B.S. degree in the departments of Biology, Chemistry, or Physics. Students considering a professional career in a high technology business or industry may wish to obtain a foundation in the Natural Sciences while using their free electives to pursue additional work in areas such as Economics, Pre-Law or a minor in Business Administration. For further information about these programs contact the Dean's office. The B.S. in Natural Science may not be used for a second major or a second degree by majors in the College of Natural Sciences and Mathematics.

Bachelor of Science—Natural Science

Liberal Studies: As outlined in Liberal Studies section 43-44
with the following specifications:

Mathematics: included in major
Natural Science: included in major
Liberal Studies electives: no courses with SC prefix
Synthesis: not required for three-year students who transfer to a professional school with an articulation agreement
Writing Intensive: one course required for three-year students who transfer to a professional school with an articulation agreement

Major: 44-46

Controlled electives(*):

BI courses	8sh
CH courses	8sh
PY courses	8sh
MA courses	7-8sh
Computer science and/or advanced courses in Biology, Chemistry, Mathematics, or Physics	13-14sh

Other Requirements: 0-9
- Foreign Language Intermediate Level (1) 0-6sh
- CO101 Microbased Computer Literacy (2) 0-3sh

Free Electives: 25-37

Total Degree Requirements: 124

( ) Preprofessional Advisors will outline the courses required for admission to a professional school
(1) Intermediate-level Foreign Language may be included in Liberal Studies electives
(2) Not required for tracks which include CO110 or CO250, may also be included in Liberal Studies electives.

Bachelor of Science—Natural Science/Pre-Astronomy Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications 56-57
- Mathematics: MA123
- Natural Science CH111-112
- Liberal Studies electives: MA124, no courses with GS prefix

Major: 33
Required courses:
- PY131 Physics I-C Lec 3sh
- PY132 Physics II-C Lec 3sh
- PY141 Physics I-C Lab 1sh
- PY142 Physics II-C Lab 1sh
- PY222 Mechanics I 2sh
- PY223 Mechanics II 2sh
- PY242 Optics 3sh
- PY322 Electricity and Magnetism I 2sh
- PY323 Electricity and Magnetism II 2sh
- GS121 Physical Geology 3sh
- GS123 Intensive Physical Geology Lab 1sh
- GS131 Historical Geology 3sh
- GS133 Intensive Historical Geology Lab 1sh
- GS341 Solar System 3sh
- GS342 Stellar Astronomy 3sh

Other Requirements: 9-15
- CO110 Problem Solving and Structured Programming 3sh
- CO250 Introduction to Numerical Methods 3sh
- MA241 Differential Equations 3sh
- Foreign Language Intermediate Level (1) 0-6sh

Free Electives: 19-26

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science—Natural Science/Pre-Engineering Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 53
- Mathematics: MA123
- Humanities/Philosophy and Religious Studies: PH222
- Natural Science: CH111-112
- Social Science: EC121, PS101 or 111
- Liberal Studies electives: MA124, no courses with SC prefix
- Synthesis: not required for three-year students
- Writing Intensive: one course required for three-year students

Major: 33-35
Required courses:
- CO110 Problem Solving and Structured Programming 3sh
- CO250 Introduction to Numerical Methods 3sh
- MA171 Introduction to Linear Algebra 3sh
- MA241 Differential Equations 3sh
- MA342 Advanced Calculus for Applications 4sh
- PY131 Physics I-C Lecture 3sh
- PY132 Physics II-C Lecture 3sh
- PY141 Physics I-C Lab (or PY121 Lab) 1sh
- PY142 Physics II-C Lab 1sh
- PY331 Modern Physics (2) 3sh

Controlled electives. One package, depending on program
Chemical Engineering:
- CH231 Organic Chemistry I 4sh
- CH232 Organic Chemistry II 4sh

Civil Engineering:
- MA216 Probability and Statistics for Natural Sciences 4sh
- ——— Technical elective 3-4sh

Electrical Engineering
- MA216 Probability and Statistics for Natural Sciences 4sh
- ——— Technical elective 3-4sh

Industrial Engineering:
- MA216 Probability and Statistics for Natural Sciences 4sh
- ——— Technical elective 3-4sh

Materials Science and Engineering
- CH231 Organic Chemistry I 4sh
- CH232 Organic Chemistry II 4sh

Mechanical Engineering:
- ——— Technical electives 6-8sh

Other Requirements: 0-6
- Foreign Language Intermediate Level (1)

Free electives: 9

Other Requirements: about 64
- Two years at University of Pittsburgh School of Engineering(2)

(#) **Total Degree Requirements:** 159-161

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives
(2) A 2.5 GPA is required for transfer to the University of Pittsburgh.
(3) For curriculum information about the cooperative program in engineering with Drexel University, refer to the catalog section for the Physics Department
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation.

Bachelor of Science—Natural Science/Pre-Meteorology or Oceanography Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 56-57
- Mathematics: MA123
- Natural Science: CH111-112
- Liberal Studies electives: MA124, no courses with GS prefix

Major: 43-46
Required courses:
- CH321 Quantitative Analysis 4sh
- CH341 Physical Chemistry 4sh
- PY131 Physics I-C Lec 3sh
- PY132 Physics II-C Lec 3sh
- PY141 Physics I-C Lab 1sh
- PY142 Physics II-C Lab 1sh
- PY222 Mechanics I 2sh
- PY233 Mechanics II 2sh
- PY342 Thermal and Statistical Physics 3sh

Controlled electives:
- One sequence from list: BI103-104 or BI105-120 8-9sh
- One sequence from list: GS361-362 or GS371-372 6sh
- One sequence from list: GS121 and 123-131 and 133 or GS341-342 6-8sh

Other Requirements: 9-15
Additional math/computer sequence
- CO110 Problem Solving and Structured Programming 3sh
- CO250 Introduction to Numerical Methods 3sh

MA241 Differential Equations	3sh
Foreign Language Intermediate Level (1)	0-6sh
Free Electives:	6-16
Total Degree Requirements:	124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science—Natural Science/Pre-Optometry Track(*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 52-55

- Mathematics: MA121
- Natural Science: CH111-112
- Social Sciences: PC101, EC101, non-Western course
- Liberal Studies electives: MA216 or 217, CO101, no courses with SC prefix
- Synthesis: not required for three-year students who transfer to a professional school with an articulation agreement
- Writing Intensive, one course required for three-year students who transfer to a professional school with an articulation agreement

Major: 35

Required courses

BI105	Cell Biology	4sh
BI120	Animal Biology	5sh
BI151	Human Physiology	3sh
BI241	General Microbiology	3sh
CH231	Organic Chemistry I	4sh
CH232	Organic Chemistry II	4sh
CH351	Biochemistry	4sh
PY111	Physics I Lecture	3sh
PY121	Physics I Lab	1sh
PY112	Physics II Lecture	3sh
PY122	Physics II Lab	1sh

Other Requirements: 0-7

Foreign Language Intermediate Level (1)	
MA122 Calculus II for Natural and Social Science and Business	4sh(2)

Free Electives: 27-37

Electives to meet minimum of 90 IUP credits	0-3sh(3)
Credits from work at Pennsylvania College of Optometry	34sh
Total Degree Requirements:	124

(*) Accelerated three-year Pennsylvania College of Optometry (PCO) program: students are admitted to the PCO accelerated program only as incoming freshmen. A maximum of thirty-four credits of work may be transferred after the first year at PCO. Upon the completion of the first year of studies at PCO, a transcript from PCO is to be sent by the student to the Dean of the College of Natural Sciences and Mathematics with a note requesting application materials for graduation.

(1) Three or four credits of Intermediate-level Foreign Language may be included in Liberal Studies electives.

(2) Required for many schools of optometry; recommended for PCO.

(3) Additional electives if needed to meet minimum of 90 IUP credits should be selected from the following suggestions: BI150: Human Anatomy, BI263: Genetics.

Department of Physics

Dennis Whitson, Chairperson; Fox, Freeman, Gaggini, Giniewicz, Hershman, Karimi, Matolyak, Matous, Numan, Ramsey, Roberts, Sobolewski, Talwar, Wijekumar; and professors emeriti Berry, Buckwalter, McNamara, Riban, Waddell

The goal of the Department of Physics is to prepare fully qualified individuals for productive careers in physics. Three degrees are offered within the College of Natural Sciences and Mathematics: the Bachelor of Science in Physics, the Bachelor of Arts in Physics, and the Bachelor of Science in Applied Physics. These programs offer adequate preparation for graduate study in physics or for research in industrial technology. The applied physics degree provides a strong technical background for work in solid state electronics and for interdisciplinary research in the areas of computer science, chemistry, biology, and geology. A Bachelor of Science degree in Education with a major in Physics is offered through the College of Education. A two-year pre-engineering program is offered in cooperation with Drexel University wherein students transfer to Drexel after two years. The department also offers a minor in Physics, as well as general science courses which satisfy the Natural Science requirements of the Liberal Studies program.

Minor in Physics

To minor in Physics, a student must successfully complete fifteen semester hours in Physics which must consist of at least three courses at the 200 level or higher. PY150 may be substituted with the permission of the chairperson.

Cooperative Pre-Engineering (Chemical, Civil, Electrical, Materials, Mechanical) Program with Drexel University

Common to all pre-engineering programs are the following science and mathematics requirements: PY131/141, PY132/142, PY322, PY342, MA123, MA124, MA171, MA241, CH111, CH112 (or appropriate substitute).

Further requirements depend on the particular engineering program chosen. Complete information regarding a specific program may be obtained from the physics department. For information on the Cooperative Pre-Engineering program with the University of Pittsburgh, see the catalog section for Natural Science and the program outline for "Bachelor of Science in Natural Science/Pre-Engineering."

Bachelor of Arts—Physics

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 56-57

- Mathematics: MA123
- Natural Science: PY131/141-132/142
- Liberal Studies electives: MA124, no courses with PY prefix

Major: 28

Required courses:

PY131	Physics I-C Lec	*sh
PY132	Physics II-C Lec	*sh
PY141	Physics I-C Lab	*sh
PY142	Physics II-C Lab	*sh
PY222	Mechanics I	2sh
PY223	Mechanics II	2sh
PY231	Electronics	4sh
PY322	Electricity and Magnetism I	2sh
PY323	Electricity and Magnetism II	2sh
PY331	Modern Physics	3sh
PY350	Intermediate Experimental Physics I	3sh
PY351	Intermediate Experimental Physics II	3sh
PY473	Quantum Mechanics I	4sh

Controlled electives:

One additional PY majors course	3sh

Other Requirements: 22-28

Additional mathematics and computer science:

CO110	Problem Solving and Structured Programming	3sh
MA241	Differential Equations	3sh
MA342	Advanced Mathematics for Applications	4sh

Additional natural science sequence	6sh
Additional social or natural science sequence (advanced)	6sh
Foreign Language Intermediate Level (1)	0-6sh

Free Electives: 11-18

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science—Physics

Liberal Studies: As outlined in Liberal Studies section with the following specifications 56-57
- Mathematics: MA123
- Natural Science: PY 131/141-132/142
- Liberal Studies electives: MA124, no courses with PY prefix

Major: 37

Required courses:

PY131	Physics I-C Lec	sh
PY132	Physics II-C Lec	sh
PY141	Physics I-C Lab	sh
PY142	Physics II-C Lab	sh
PY222	Mechanics I	2sh
PY223	Mechanics II	2sh
PY231	Electronics	4sh
PY242	Optics	3sh
PY322	Electricity and Magnetism I	2sh
PY323	Electricity and Magnetism II	2sh
PY331	Modern Physics	3sh
PY342	Thermal and Statistical Physics	3sh
PY350	Intermediate Experimental Physics I	3sh
PY351	Intermediate Experimental Physics II	3sh
PY473	Quantum Mechanics I	4sh

Controlled electives:

One course from list: PY472 or PY490	3sh
One additional PY majors course	3sh

Other Requirements: 13-19

Additional Mathematics:

CO110	Problem Solving and Structured Programming	3sh
MA241	Differential Equations	3sh
MA342	Advanced Mathematics for Applications	4sh
One from list: CO250, MA171, MA363, MA421, MA423		3sh
Foreign Language Intermediate Level (1)		0-6sh

Free Electives: 11-18

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science Applied Physics

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 56-57
- Mathematics: MA123
- Natural Science: CH111-112 (replaced by CH113-114 for Chemistry track)
- Liberal Studies electives: MA124, no courses with PY prefix

Major: 28

Required courses:

PY131	Physics I-C Lec	3sh
PY132	Physics II-C Lec	3sh
PY141	Physics I-C Lab	1sh
PY142	Physics II-C Lab	1sh
PY150	Computer Application to Physics Laboratories	3sh
PY222	Mechanics I	2sh
PY231	Electronics	4sh
PY242	Optics	3sh
PY322	Electricity and Magnetism I	2sh
PY331	Modern Physics	3sh
PY352	Applied Physics Laboratory	3sh

Other Requirements: 9-15

MA241	Differential Equations	3sh
CO110	Problem Solving and Structured Programming	3sh
CO250	Introduction to Numerical Methods	3sh
Foreign Language Intermediate Level (1)		0-6sh

Controlled electives: According to Track 23-27
- Solid State Electronics Track: CO300, MA342, PY323, PY342, PY353, PY432, PY475, PY476 — 24
- Computer Science Track: PY342, PY353, PY432, PY475, PY476, CO300, CO310, CO410, CO450 — 27
- Chemistry Track: MA342, CH231, CH232, CH323, CH341, CH342, CH343 — 24
- Biology Track: BI105, CH231, BI120, CH323, CH351, Two biology electives from the following: BI263, BI361, BI472, BI350, BI401 — 27
- Geology Track: GS121, GS122, GS131, GS132 — 23
  Five Geoscience electives from the following: GS321, GS325, GS326, GS362, GS412, GS440, GS481

Free Electives: 3-8

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

Bachelor of Science in Education—Physics (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 56-57
- Mathematics: MA123
- Natural Science: CH111-112
- Social Sciences: PC101
- Liberal Studies electives: MA241; BI103(1); GS110, GS121, GS141, or GS221; no courses with PY prefix

College: 30

Professional Education Sequence

CM301	Technology for Learning and Instruction	3sh
ED242	Pre-student Teaching Clinical Experience I	1sh
ED342	Pre-student Teaching Clinical Experience II	1sh
ED441	Student Teaching	12sh
ED442	School Law	1sh
ED451	Teaching of Science in the Secondary School	3sh
EP202	Educational Psychology	3sh
EP377	Educational Tests and Measurements	3sh
FE202	American Education in Theory and Practice	3sh

Major: 32

Required courses:

PY131	Physics I-C Lec	3sh
PY132	Physics II-C Lec	3sh
PY141	Physics I-C Lab	1sh
PY142	Physics II-C Lab	1sh
PY222	Mechanics I	2sh
PY223	Mechanics II	2sh
PY231	Electronics	4sh
PY242	Optics	3sh
PY322	Electricity and Magnetism I	2sh
PY331	Modern Physics	3sh
PY342	Thermal and Statistical Physics	3sh
PY350	Intermediate Experimental Physics I	3sh

Controlled electives:

Physics electives	2sh

Other Requirements: 8

Additional Math courses:

MA124	Calculus II for Physics and Chemistry	4sh
MA342	Advanced Math for Applications	4sh

Free Electives: 0

(#) **Total Degree Requirements:** 126-127

(*) See requirements leading to teacher certification in the catalog section on "Academic Policies," "Admission to Teacher Education."
(#) See advisory paragraph "Timely Completion of Degree Requirements" in catalog section on Requirements for Graduation
(1) BI103 is in the process of being submitted for approval by the Liberal Studies Committee. If BI103 is not approved, BI114 will be used

Department of Psychology

Carl W. Schneider, Chairperson; Anderson, Berman, Goodwin, Grover, Hansen, Kaniasty, Magee, Marquette, McHugh, Patton, Pavloski, Quigley, Rich, Rittle, Robertson, Sadler, Stires, Sussmann, Thornton, VandeCreek, Vormbrock, Walz, Zanich, Zinny

The program in psychology leads to a Bachelor of Arts degree and is designed to give the student an understanding of the methods and major findings in the science of behavior and mental processes. The major offers the background required for graduate work in psychology and also preparation for such related fields as social work, personnel work, advertising, medicine, law, and theology. The department also offers a minor in psychology.

An honors program has been developed to enrich the education of qualified psychology majors and assist such students in gaining entrance to graduate school by providing classroom and research experiences which will prepare them for work at the graduate level.

A track in applied psychology was developed which offers students a firm background in the science of psychology, preparation for nonclinical applications of psychology to the solution of human and social problems in private and public organizations, and preparation for graduate study in the applied area of psychology. The core for the track is the same as for the psychology major; coursework in applied psychology is provided by enrolling in appropriate psychology electives and a carefully designed concentration of courses outside the department.

All psychology majors are required to take a minor or a concentration in another discipline.

Bachelor of Arts in Psychology

Liberal Studies: As outlined in Liberal Studies section 54-55
with the following specifications:
Mathematics: MA217
Natural Science: BI103-104 recommended
Social Science: PC101
Liberal Studies electives: BE/CO/IM101, no courses with PC prefix

Major: 33
Required courses:

PC290	Research Design and Analysis I	4sh
PC291	Research Design and Analysis II	4sh

Controlled electives:
One course from each of these six core areas:

A.	Developmental Psychology: PC310, 311, 312	3sh
B	Individual Differences: PC320, 321, 322	3sh
C.	Social/Environmental: PC330, 331	3sh
D	Cognition/Learning: PC340, 341, 342	4sh
E.	Biological Bases of Behavior: PC350, 352	4sh
F	Metatheoretical Perspectives in Psychology: PC410, 411	3sh

Other PC electives beyond PC101 5sh

Other Requirements: 0-6
Foreign Language Intermediate Level (1)

Minor/concentration: 15

Free Electives: 15-22

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) At least two must be content based laboratory courses.

Bachelor of Arts in Psychology/Applied Psychology Track

Liberal Studies: As outlined in Liberal Studies section 54-55
with the following specifications:
Mathematics: MA217
Natural Science: BI103-104 recommended
Social Science: PC101, EC121
Liberal Studies electives: BE/CO/IM101, no courses with PC prefix

Major: 37
Required courses

PC290	Research Design and Analysis I	4sh
PC291	Research Design and Analysis II	4sh
PC420	Psychology of Organizations	3sh
PC421	Psychology of Work	3sh
PC493	Practicum	3sh(2)

Controlled electives:
One course from each of these six core areas (3):

A	Developmental Psychology: PC310, 311, 312	3sh
B	Individual Differences: PC320, 321, 322	3sh
C	Social/Environmental: PC330, 331	3sh
D	Cognition/Learning: PC340, PC341, PC342	3sh
E	Biological Bases of Behavior: PC350, 352	4sh
F	Metatheoretical Perspectives in Psychology: PC410, 411	3sh

Other Requirements: 15-21
Outside concentration

EC122	Principles of Economics II	3sh
EC330	Labor Economics	3sh
LR480	Principles and Practices of Collective Bargaining	3sh

2 courses, as approved by adviser (4) 6sh
Foreign Language Intermediate Level (1) 0-6sh

Free Electives: 11-18

Total Degree Requirements: 124

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
(2) Department recommends at least 6 credits of PC493: Practicum.
(3) At least two must be content-based laboratory courses.
(4) Department highly recommends PC424: Planned Organizational Change and recommends one course from business or another applied area

Minor—Psychology

Required courses 20

PC101	General Psychology	3sh(1)
PC280	Psychological Inquiry	3sh
	or	
PC290	Research Design and Analysis I	4sh(2)

Four other PC electives beyond PC101 12sh(3)

(1) Meets Liberal Studies Requirement
(2) Prerequisite MA217
(3) Selected in consultation with the director of the undergraduate program

Minor—Psychological Science

Required courses: 17-18

PC101	General Psychology	3sh(1)
PC290	Research Design and Analysis I	4sh(2)
	One course from core areas A, B, or C	3sh
	One course from core areas D or E	4sh
	One PC elective	3-4sh

(1) Meets Liberal Studies Requirement
(2) Prerequisite MA217

The School of Continuing Education

Nicholas E. Kolb, Dean

The mission of the School of Continuing Education is to serve the lifelong educational needs of nontraditional students, working adults, professional organizations, local and state agencies, and the citizens of the commonwealth by providing access to the academic and human resources of IUP.

The School of Continuing Education was created by the IUP Board of Trustees in May, 1966. Today, the school comprises the Division of Credit Programs, the Division of Conferences and Noncredit Programs, the Highway Safety Center, and the Criminal Justice Training Center. The school is characterized by its commitment to academic excellence and high-quality programs. The school maintains a dynamic environment which fosters innovation and experimentation in order to continually improve programs and respond to the ever-changing needs of society.

Division of Credit Programs

Edward W. Nardi, Assistant Dean

The Division of Credit Programs offers a variety of opportunities for the adult and nontraditional learner to access the academic resources of IUP on a part-time basis. Courses may be selected from day or evening offerings.

The Associate of Arts Degree in General Studies is designed for the nontraditional or adult learner who seeks to acquire a broad base of knowledge in the liberal arts. This program consists of the core of Liberal Studies requirements of the IUP bachelor's degree programs plus nine to twelve credits of electives. The student is encouraged to develop a plan of study with his or her academic adviser which will bring focus to the individual's interest in a particular area or subject. No more than thirty credits may be transferred into this degree program from other colleges.

The Bachelor of Science degree in General Studies is designed for the mature adult student, who under faculty advisement can explore and develop an individualized plan of study which does not approach any existing IUP major. This self-designed plan of study must be based on a specific theme which incorporates basic and applied coursework within a theoretical framework culminating in a senior-year independent research project. At the time of application for degree candidacy through the School of Continuing Education or transfer from another major, the student must submit a plan of study which contains the proposed theme, rationale, and courses needed to satisfy the Special Interest Area. A faculty member will be assigned to assist with the plan of study prior to acceptance to degree candidacy. Students other than School of Continuing Education students must have completed 45sh before a request for transfer will be honored.

The student's plan of study, which is designed to fulfill the Special Interest Area, must be approved by the student's adviser and the dean of the School of Continuing Education.

Associate of Arts—General Studies

Liberal Studies: as outlined in the Liberal Studies Section with the following specifications and modifications:	50-53
Learning Skills	10-11sh
Humanities	9sh
Fine Arts	3sh
Natural Science	7-8sh
Social Science	9sh
Health and Wellness/ROTC	3-4sh
Controlled Liberal Studies Electives	9sh
Free Electives:	9-12
Total Degree Requirements:	62

Bachelor of Science—General Studies

Liberal Studies: As outlined in Liberal Studies section 53-54

General Area of Study 24

Choose at least 6sh from three of the four areas listed below. At least 12sh must be 300-level or above. Courses should relate to theme developed in Special Interest Area.

Human Behavior and Development Area
- Anthropology
- Health
- Home Economics
- Psychology
- Sociology

Social and Political Systems Area
- Economics
- Geography and Regional Planning
- History
- Industrial and Labor Relations
- Political Science
- Social Sciences

Arts, Letters, and Culture Area
- Art
- Communications Media
- English
- French
- German
- Journalism
- Music
- Philosophy
- Religious Studies
- Spanish
- Theatre

Science, Mathematics, and Technology Area
- Biology
- Chemistry
- Computer Science
- Geoscience
- Mathematics
- Physics

Special Interest Area (3) 21
With approval of adviser, student may select, from any department listed above, courses which focus on a particular need or interest. At least 12sh must be 300-level or above. The program must include either one research course which provides opportunities for extensive writing or an independent study project. Some courses will not be available to General Studies majors.

Electives 25-26
At least 6sh must be 300-level or above.

Total Degree Requirements: 124

(1) Individually planned theme may not duplicate any existing degree programs which are otherwise available at IUP, nor may they be used to circumvent specific requirements within an existing major.
(2) No more than 30 semester hours taken in any one department will count toward graduation.
(3) In application of university policies, the Special Interest Area is considered as the major. Specifically, in order to graduate, students must be in academic good standing and attain a 2.00 grade point average in the Special Interest Area.

Part-time Studies Program (Nondegree)
The Part-time Studies Program is designed to offer the adult and nontraditional learner the opportunity to begin or renew a college education at IUP. Through this program an individual may enroll in undergraduate credit courses to pursue personal interests, acquire new skills, or work toward formal admission to degree candidacy. Credit earned in this program may be applied to a degree upon formal admission to an IUP degree program.

Postbaccalaureate Program
The Postbaccalaureate Program is designed to provide access to undergraduate courses to individuals who have an earned baccalaureate degree. Students may be seeking a second bachelor's degree, permanent teacher certification, or personal enrichment. Postbaccalaureate students may attend IUP on a part-time or full-time basis.

Off-Campus Studies Program
The Off-Campus Studies Program is designed to support the efforts of IUP and its faculty to offer academic programs and credit courses to specific groups of individuals through the on-site delivery of university courses. The Master of Education in Elementary Education and the Master of Science in Adult and Community Education are offered in the Pittsburgh area. The Master of Science in Safety Sciences is offered in Harrisburg at the SSHE University Center. In addition, undergraduate courses are available at the IUP Bedford County Center and periodically at various other off-campus locations throughout the commonwealth.

Adult Advisement Services
Adult Advisement Services provides the part-time, nontraditional, and adult learner access to academic exploration and planning through individual conferences and workshops. Seminars are offered throughout the year to provide the opportunity for adult learners to become acquainted with the many resources of the university.

Division of Conferences and Noncredit Programs

Donna Griffith, Director

The division offers a wide variety of noncredit programs in an effort to meet community needs in the areas of public service, professional development, and personal enrichment.

Business, Industry, and Labor
Courses and workshops are offered in the following areas: Computer Literacy, Management Development, Small Business Development, Certified Public Accountant Series, and Contract Training. Certificate programs include Real Estate and Paralegal. Courses may be offered at IUP or at the business/industry site, as preferred.

Community-University Studies
Noncredit courses and workshops are offered in Indiana, Kittanning, and Punxsutawney. Personal growth and enrichment topics include creative leisure, self improvement, fitness, culinary arts, languages, money and finances, art/music/literature, Elderhostel, and Mornings with the Professors. There are no exams, no grades, and no pressure. The program is provided as a service to the community.

Special Programs
The education and training needs of health and human service professionals are met through course offerings, one-day workshops, seminars, and conferences. Additionally, Youth Experience in Summer (YES) provides educational enrichment for youth in elementary through high school grades.

Conferences
The division facilitates conferences offered by academic departments and hosts off-campus groups and organizations during the summer months. The conference staff also provides consulting services and coordinates conferences throughout the state for IUP and other organizations.

Highway Safety Center

Richard J. Hornfeck, Director

IUP's Highway Safety Center attempts to address the highway safety needs of the commonwealth through a variety of programs and activities. The Highway Safety Center programs encompass activity in five major areas: 1) research, surveys, and studies, 2) education (teaching), 3) training and conferences, 4) field and extension services, and 5) traffic safety communications and information exchange.

Teacher Certification in Driver Education
Through cooperative effort with IUP's Department of Health and Physical Education, the Highway Safety Center coordinates and directs IUP's Teacher Certification Program in Driver Education.

IUP Regional Highway Safety Project
The IUP Regional Highway Safety Project is a federally funded program contracted with the Pennsylvania Department of Transportation's Center for Highway Safety. Originating at IUP in January, 1987, under the title of the Indiana County Seat Belt Program, its purpose was to increase public awareness and the usage of occupant restraints. The program expanded its emphasis and territory in 1989 and now includes the counties of Armstrong, Jefferson, and Clearfield. Programs for corporations, schools, civic groups, law enforcement agencies, etc., include topics such as occupant safety, bicycle safety, pedestrian safety, safe driving characteristics, and DUI. The project also serves as a resource to other community safety groups by providing printed materials, audiovisual aids, crash-car dummy costumes, and the "Seat Belt Convincer." A Car Seat Loaner Program also provides car seats to residents in Indiana County.

Driver Training Programs
From basic driver education programs for beginning drivers to truck driver training to advanced driver training programs in emergency driving techniques, the Highway Safety Center provides a cadre of courses all designed to meet the needs of the student.

Emergency Services Training
This is a large diversified program area designed to meet the training needs of ambulance, fire, and police personnel in the areas of emergency medical services and rescue.

Motorcycle Safety Program
MSP is a statewide motorcycle riding program funded by the Pennsylvania Department of Transportation to help reduce the rising number of serious motorcycle accidents. MSP was designed to offer all riders—both novice and experienced—the opportunity to learn how to handle a motorcycle correctly, safely, and with confidence in all riding situations.

Traffic Accident Investigation

Traffic Accident Investigation programs are available for safety directors, insurance adjusters, and police personnel. Courses range from basic investigation up to and including accident reconstruction.

Criminal Justice Training Center

Gary M. Welsh, Director

The Criminal Justice Training Center's role in both the university and the community is to provide high-quality education and training programs for the continuing professionalism of the criminal justice system.

These programs include seminars for in-service personnel in fulfillment of mandatory continuing education requirements. They are conducted on an "as needed" basis covering an unlimited range of topics, such as vehicle and criminal law updates, search and seizure, accident investigation, alcohol enforcement, and driver proficiency. Grant-funded programs may be written and conducted in the above programs. Special programs are provided to offer the basic 480-hour academy training required for law enforcement service under Mandatory Act 120. Training under the Lethal Weapons Act 235 provides the basic requirements and mandatory recertification for armed security personnel.

Course Descriptions

Credit designation at right of title is expressed in (c) class hours per week, (l) lab or (d) discussion section hours per week, and (sh) semester hours of credit per semester.

AD: Administrative Services
Department of Office Systems and Business Education
College of Business

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

AD 101 Introduction to Business 3c-0l-3sh
Overview of the principles, practices, and methods common to most business firms in a private enterprise system. (Not open to juniors and seniors in Business)

AD 221 Business Technical Writing 3c-0l-3sh
Prerequisite: EN101
Application of business and technical writing styles, letters, memos, reports, procedures, and manuals are some areas of concern. Emphasis on clear, concise writing style. (Branch campus course only. May not be used as a substitute for AD321)

AD 321 Business and Interpersonal Communications 3c-0l-3sh
Prerequisite: EN101, EN202
Study of communication theory and principles as applied to business situations and practices; development of communication skills in areas of communication such as speaking, writing, listening, and nonverbally communicating. Emphasis on building effective interpersonal relations in a business environment.

AD 481 Special Topics in Administrative Services, Business Education, or Distributive Education 3c-0l-3sh
Prerequisite: Consent of departmental chairperson and dean, College of Business

AE: Art Education
Department of Art
College of Fine Arts

AE 315 Survey of Art Education 3c-0l-3sh
A seminar to introduce the art education major to the principles and practices of teaching visual arts K through 12. Field experiences, pre-student teaching activities, introduction to literature, and history and philosophies of art education emphasized. (Prerequisite to student teaching) Fall only.

AE 316 Art Education Materials and Practicum 1c-3l-3sh
An art education studio which will be an investigation and exploration of typical art materials, including sources and resources of supplies, equipment, resource personnel, and visual media for a full range of multimedia and visual experiences. The studio endeavors will be followed by a practicum utilizing the above sources in teaching situations with children, youth, and adults. (Prerequisite to student teaching) Fall only.

AE 317 Art Education Methodology at the Elementary Level 1c-3l-3sh
Examines children's artistic development, art programs, planning, motivation, and evaluation. Weekly teaching experience is an integral part of the course. (Prerequisite to student teaching) Fall only.

AE 318 Art Education Methodology at the Secondary Level 1c-3l-3sh
Relationship of art education to the total secondary curriculum is studied to determine goals of junior-senior high school art. The adolescent creative products are analyzed to help the prospective art teacher to identify with problems of students. (Prerequisite to student teaching) Spring only.

AE 330 Art for the Mentally and Physically Handicapped 1c-3l-3sh
The materials and processes of arts and crafts are studied for opportunities they offer in the training, therapy, and education of the mentally deficient, physically impaired, emotionally disturbed, and multiple impaired child or adult.

AG: Accounting
Department of Accounting
College of Business

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

AG 201 Accounting Principles I 3c-0l-3sh
Prerequisite: Sophomore status (29sh) or permission of department chairperson
Introduces the student to the accounting cycle in service and merchandising concerns using the single proprietorship form of business organization; covers use of special journals and subsidiary ledgers in the accounting system as well as accounting and internal control procedures for cash, receivables, inventory, and plant and equipment.

AG 202 Accounting Principles II 3c-0l-3sh
Prerequisites: C or better in AG201, sophomore status
Covers accounting principles and procedures for payroll, partnerships, corporations, long-term liabilities and investments, and manufacturing firms with a general accounting system. Introduces the student to cost accounting systems, financial statements analysis, budgeting, and use of accounting information in making managerial decisions.

AG 299 Cooperative Education I 0c-0l-2sh
Prerequisites: Completion of 55 credits with a minimum GPA of 2.0 including at least a "C" in AG201, AG202, and IM241, and approval of the cooperative adviser
The initial experience in a program designed to combine classroom theory with practical application through job-related experiences. Students are actively employed in the accounting area in business, industry, government, and a variety of organizations and agencies with a work focus which relates to their academic training and career objectives in accounting. The student is expected to complete subsequently AG399 or an internship.

AG 300 Managerial Accounting 3c-0l-3sh
Prerequisite: AG202 (not open to Accounting majors)
Emphasizes the use of accounting information in performing the managerial functions of planning, control, decision making, and performance evaluation. Note: Accounting majors will not be granted degree credit for AG300.

AG 301 Intermediate Accounting I 3c-0l-3sh
Prerequisite: C or better in AG202
An overview of the foundation of accounting theory dealing with application of generally accepted accounting principles as promulgated in professional pronouncements to the reporting process and to accounting for various asset items in the financial statements.

AG 302 Intermediate Accounting II 3c-0l-3sh
Prerequisite: C or better in AG301
Application of generally accepted accounting principles to various areas such as accounting for corporations, long-term investments in securities, bonds, pension costs, leases, etc.

AG 311 Cost Accounting 3c-0l-3sh
Prerequisite: C or better in AG202
Cost accounting methods and procedures including cost accumulation under job order cost system and process cost system, cost allocation, budgeting, and accounting for spoilage, joint, and by-products. The planning and control aspect of cost accounting is emphasized.

AG 399 Cooperative Education II 0c-0l-3sh
Prerequisites: AG299; completion of 85 credits with an overall GPA of 2.0; a GPA of 2.3 in AG301, AG302, and AG311 with at least a "C" in each course; and approval of the cooperative adviser
The subsequent course in cooperative education designed to combine

classroom theory with practical application through job-related experiences. Cooperative Education students are actively employed in the accounting area in business, industry, government, and a variety of organizations and agencies with a work focus which relates to their academic training and career objectives in accounting.

AG 401 Advanced Accounting 3c-0l-3sh
Prerequisite: AG302
Study of accounting issues of specialized nature including partnerships, organization and liquidation, agency and branch accounting, accounting for business combinations, preparation of consolidated financial statements, accounting for government and not-for-profit entities, accounting for estates and trusts, and receivership accounting.

AG 412 Advanced Cost Accounting 3c-0l-3sh
Prerequisite: C or better in AG311
Study of budgets, standard costs, direct and absorption costings, analysis of cost variances, and extensive analysis of various cost control and profit planning programs.

AG 421 Federal Taxes 3c-0l-3sh
Prerequisite: C or better in AG202
Acquaints the student with Federal Income Tax Laws as they apply to individual taxpayers and partnerships.

AG 422 Federal Taxation of Corporations, Partnerships, Estates, and Trusts 3c-0l-3sh
Prerequisites: AG421 and AG302
Advanced course in federal income taxation as it applies to taxpayers other than individuals. Covers the tax treatment of those property transfers subject to federal and state gift and death taxes. The tax planning aspect of the various course topics as well as tax research methodology are also discussed.

AG 431 Auditing 3c-0l-3sh
Prerequisite: AG302
Study of auditing theory and practical application of auditing standards and procedures to the review, testing, and evaluation of accounting controls and to the verification of transactions and balances to express an opinion in an audit report on the fairness of financial statements' presentation.

AG 435 Internal Auditing 3c-0l-3sh
Prerequisite: AG431
This course covers four issues: foundations for internal auditing, administering internal auditing activities, operational areas, and special relationships and evaluation for internal auditing.

AG 441 Accounting For Government and Nonprofit Organizations 3c-0l-3sh
Prerequisite: AG302
Presents the views of authoritative professional organizations as to desirable standards of accounting and reporting for governmental and nonprofit entities. Topics include budgeting and budgetary accounts, accounting for various funds, the general fixed assets group of accounts, the financial reporting process, and application of the principles of fund accounting in specific areas.

AG 451 Seminar in Accounting Standards 3c-0l-3sh
Prerequisite: AG302
Study of professional standards having authoritative support in the field of accounting. APB opinions, FASB interpretations, and SEC Accounting Series Releases are discussed.

AG 461 Accounting Systems 3c-0l-3sh
Prerequisites: AG302, AG311, IM300
Study of concepts, principles, and procedures of accounting system design, installation, implementation, auditing, and maintenance in relating to system objectives, information requirements, constraints, system elements, and considerations on a computerized basis.

AG 471 International Accounting 3c-0l-3sh
Prerequisites: AG311 for Accounting majors or AG300 for non-Accounting majors
A comparative study of the effects of differences in cultural and business philosophies on national and international accounting policies. Specific financial accounting controversies, such as accounting for transactions involving foreign currency exchanges, will be discussed. International management accounting topics will include international transfer pricing policies, performance evaluations of multinational managers and divisions, and management information systems. International aspects of financial planning, auditing, and taxation practices will also be reviewed.

AG 482 Independent Study 3sh
Prerequisite: Consent of departmental chairperson and dean, College of Business
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member.

AG 488 Internship in Accounting (Industrial and Government) 6sh
Prerequisites: Consent of departmental chairperson and dean, College of Business. Overall GPA of 2.75 and GPA in accounting courses of 3.0. Practical experiences, generally totaling 400 hours, in an industrial or government accounting setting.

AG 493 Internship in Accounting (Public) 6sh
Prerequisite: Consent of departmental chairperson and dean, College of Business. Overall GPA of 3.00 and GPA in accounting courses of 3.0. Practical experiences, generally totaling 400 hours, with a public accounting firm.

AH: Art History
Department of Art
College of Fine Arts

AH 101 Introduction to Art 3c-0l-3sh
Designed to introduce the student to the significance of art as related to contemporary living and our historical heritage.

AH 205 Ancient to Medieval Art 3c-0l-3sh
Study of art from prehistoric times to the Middle Ages. Man's artistic development is seen in relation to political, social, economic, and religious events. Course was offered as AH115 prior to Summer, 1990.

AH 206 Renaissance to Baroque Art 3c-0l-3sh
Study of art from the Renaissance to the Baroque in light of the historical events which affect man's artistic impulses and development. Course was offered as AH116 prior to Summer, 1990.

AH 211 Modern Art 3c-0l-3sh
A survey of the revolutionary movements which began about 1850; concludes with trends in contemporary arts.

AH 222 Art in America 3c-0l-3sh
Surveys American art and its relation to the development of American ideas and ideals.

AH 407 Medieval Art 3c-0l-3sh
Art and architecture of Europe during the Middle Ages, beginning with early Christian and Byzantine and concluding with the Gothic period. Dual listed for graduate credit as AH507.

AH 408 Italian Renaissance Art 3c-0l-3sh
Italian art from 1400s through 1650 and Mannerist movement. Special attention paid to great masters of the period. Dual listed for graduate credit as AH508.

AH 409 Baroque and Rococo Art 3c-0l-3sh
A general survey of art from 1575-1775, will include architecture, sculpture, painting, and other arts. Dual listed for graduate credit as AH509.

AH 412 Classical Art 3c-0l-3sh
Historical survey of the architecture, painting, sculpture, and minor arts of the classical period of Greece and Rome, including the Minoan, Mycenaean, and Etruscan cultures.

AH 413 Senior Seminar 3c-0l-3sh
Intended to help students develop adequate vocabularies and methods to be used in discussion and criticism of works of art.

AH 416 Northern Renaissance Art 3c-0l-3sh
Explores phenomena of art north of the Alps from 1400 to 1600, especially as it appears in the Lowlands, as well as side explorations into art of France, Germany, Austria, and the court at Prague

AH 419 Museology var-1 to 6sh
The student will work in the University Museum under the supervision of the director. Museum techniques and practices in an "on the-job" training situation will be stressed. Dual listed for graduate credit as AH519.

AM: Applied Music
Department of Music
College of Fine Arts

Music majors and others who may qualify take private instruction in their respective major areas of performance in instrument or voice for up to eight semesters. Half-hour lessons are given each week (2 sh) for students enrolled in the B.S. and B.A. degree programs. A one-hour lesson (4 sh) is scheduled by students enrolled in the B.F.A. degree program only.

AM 101, 151, 201, 251, 301, 351, 401, 451	Piano I-VIII
AM 102, 152, 202, 252, 302, 352, 402, 452	Organ I-VIII
AM 103, 153, 203, 253, 303, 353, 403, 453	Harpsichord I-VIII
AM 104, 154, 204, 254, 304, 354, 404, 454	Harp I-VIII
AM 105, 155, 205, 255, 305, 355, 405, 455	Voice I-VIII
AM 106, 156, 206, 256, 306, 356, 406, 456	Violin I-VIII
AM 107, 157, 207, 257, 307, 357, 407, 457	Viola I-VIII
AM 108, 158, 208, 258, 308, 358, 408, 458	Cello I-VIII
AM 109, 159, 209, 259, 309, 359, 409, 459	String Bass I-VIII
AM 110, 160, 210, 260, 310, 360, 410, 460	Flute I-VIII
AM 111, 161, 211, 261, 311, 361, 411, 461	Clarinet I-VIII
AM 112, 162, 212, 262, 312, 362, 412, 462	Oboe I-VIII
AM 113, 163, 213, 263, 313, 363, 413, 463	Bassoon I-VIII
AM 114, 164, 214, 264, 314, 364, 414, 464	Saxophone I-VIII
AM 115, 165, 215, 265, 315, 365, 415, 465	Trumpet I-VIII
AM 116, 166, 216, 266, 316, 366, 416, 466	French Horn I-VIII
AM 117, 167, 217, 267, 317, 367, 417, 467	Trombone I-VIII
AM 118, 168, 218, 268, 318, 368, 418, 468	Baritone Horn I-VIII
AM 119, 169, 219, 269, 319, 369, 419, 469	Tuba I-VIII
AM 120, 170, 220, 270, 320, 370, 420, 470	Percussion I-VIII
AM 121, 171, 221, 271, 321, 371, 421, 471	Guitar I-VIII

AN: Anthropology
Department of Anthropology
College of Humanities and Social Sciences

AN 110 Contemporary Anthropology 3c-0l-3sh
An introduction to the nature of anthropological inquiry. By using the anthropological perspective, current relevant topics will be discussed. Topics could include but are not limited to changing myths and rituals, legal anthropology, cross-cultural aspects of aging, gender roles, evolutionism and creationism, cultural extinction, and world hunger. Prior to Spring, 1989, was listed as AN110: Introduction to Anthropology.

AN 211 Cultural Anthropology 3c-0l-3sh
Explores the nature of culture as a human survival technique. Provides a framework for appreciation and understanding of cultural differences and similarities in human societies, past and present

AN 213 World Archaeology 3c-0l-3sh
Survey of the prehistory of Western and non-Western cultures with emphasis on the development of technology and on the evolution of adaptive strategies with particular attention to the origins of agriculture. This course exposes the students to the diversity of past cultural systems and to the methodological and theoretical questions of concern to archaeologists.

AN 222 Biological Anthropology 3c-0l-3sh
Introduction to the goals and techniques of biological anthropology with emphasis on primatology, paleoanthropology, genetics, and osteology. Provides a basis for evaluating the role of biology in human behavior.

AN 233 Language and Culture 3c-0l-3sh
Focuses on social and cultural functions of language. Particular emphasis given to problems in anthropology with respect to non-Western languages.

AN 244 Basic Archaeology 3c-0l-3sh
Introduction to the goals and methods of anthropological archaeology with particular attention to the analysis of cultural chronology, past lifeways, and cultural process. Provides laboratory experience with artifacts and other archaeological data.

AN 271 Cultural Area Studies: Africa 3c-0l-3sh
Explores the cultural diversity of the continent of Africa. The first unit examines the historical processes which shape modern society, including the formation of indigenous African empires, the evidence for trade routes, slave trading, and colonialism. The second unit examines the nature of African traditional societies, including analyses of forager and agricultural groups. The last unit covers issues of contemporary development in Africa such as famine and agricultural policy, the status of women in economic development, and apartheid. Reading includes ethnographic and historical accounts of African society as well as selections by African writers on the issues of contemporary society. (Also offered as SO271; may not be taken for duplicate credit.)

AN 272 Cultural Area Studies: China 3c-0l-3sh
Designed to assist the student in developing an understanding of contemporary China. While the course will begin with prehistoric and historic aspects of China, the focus will be on contemporary issues presented in the context of anthropological theory. Specific Chinese cultural components that will be investigated include values, attitudes, norms, social organization, linguistics, and folklore. (Also offered as SO272; may not be taken for duplicate credit.)

AN 273 Cultural Area Studies: Southeast Asia 3c-0l-3sh
An introduction to the peoples and cultures of Southeast (SE) Asia. Prehistory and the development of indigenous states in SE Asia and analysis of impact of world religions, such as Islam, and Western colonialism. Also examines modern hunter-gatherer and farming societies and discusses contemporary issues in social and economic change, including the "Green Revolution," tropical deforestation, the struggle of ethnic minority tribal peoples, and the plight of Indochinese refugees. (Also offered as SO273; may not be taken for duplicate credit.)

AN 274 Cultural Area Studies: Latin America 3c-0l-3sh
An introduction to the peoples and cultures of Latin America. Focuses on the prehistory and development of pre-Columbian complex societies in Mesoamerica and the Andes and analyzes the impact of European colonialism on these major regions. Also examines contemporary issues, such as civil wars, economic development, rural-urban migrations, and migration and immigration of Latin American peoples into the United States. (Also offered as SO274; may not be taken for duplicate credit.)

AN 286 Marriage, Kinship, and the Family 3c-0l-3sh
Sociological and anthropological study of patterns of marriage, kinship, and family life, with emphasis on the relationship between family patterns and other social institutions. Topics covered include the family and marriage in historical and comparative perspective; worldwide patterns of gender stratification; incest and incest avoidance; class and race contexts of family patterns; mate selection and love; parenthood and child rearing; domestic and sexual violence; alternative family lifestyles; and the current crisis and possible future of the family. Intended for a broad audience but also open to

sociology and anthropology majors and minors. (Also offered as SO286; may not be taken for dupheate credit.)

AN 312 World Ethnography 3c-0l-3sh
Detailed study of specific preliterate cultures. Emphasis given to questions of cultural integration.

AN 314 Native Americans 3c-0l-3sh
Survey of culture history and culture area characteristics of the Indians of North America. Detailed study of representative groups related to historical, functional, and ecological concepts.

AN 315 North American Archaeology 3c-0l-3sh
Prerequisite: AN110 or AN244 or permission of the instructor
Survey of North American prehistory with emphasis on cultural ecology and technology. Attention is given to all geographic areas north of Mexico, but the focus is on the Eastern Woodlands.

AN 316 Anthropology of Religion 3c-0l-3sh
Prerequisite: AN110 or AN211
Explores nature, function, and universal characteristics of religion in human society by utilizing cross-cultural approach. Theories concerning religious phenomena serve as topics for discussion.

AN 317 Archaeology Research Design and Analysis 3c-0l-3sh
Prerequisite: AN244 or permission of the instructor
Introduction to theory and method in archaeological research through lecture, laboratory exercises, and individual projects. Provides students with actual experience analyzing and interpreting archaeological data sets.

AN 318 Museum Methods 3c-0l-3sh
Prerequisite: AN110 or AN211 or AN244
Lecture and laboratory course surveying the role of museums as social and educational institutions, types of museums, museum administration, and museum architecture. Procedures for collection, curation, preservation, and storage of anthropological and natural history specimens examined.

AN 320 Archaeological Field School var-6sh
Prerequisite: AN110, AN244, or permission of instructor
Introduction to archaeological survey, field excavation, and laboratory processing. Field school students participate in one or more of the on-going research projects of the IUP Archaeology Program.

AN 340 Anthropology of Aging 3c-0l-3sh
Introduces the student to various experiences faced by elderly people in numerous world's societies. Explores the impact of such factors as ethnicity, nationality, race, and class and the processes of cultural change on the lives of people growing old. Comparative, cross-cultural perspectives will be stressed.

AN 350 Anthropology of Women 3c-0l-3sh
Designed for any student with an interest in the lives of women around the world, regardless of whether or not they have a strong background in anthropology. Examines the social roles, rights, and responsibilities of women cross-culturally, viewing both women's productive (economic) functions as well as reproductive functions. Reading describes the position of women in technologically simple societies and addresses the comparative position of women in the industrialized socialist and capitalist countries. The central theme of the course is an examination of how the position of women has changed in the twentieth century.

AN 360 Applied Anthropology 3c-0l-3sh
Applied anthropology focuses on the anthropologist as an agent of social change and bridges the gap between theories of cultural behavior and the policies which affect contemporary cultures. Examines the historical role of anthropologists in early public administration and then examines at length the work of contemporary applied anthropologists in programs of international economic development (health, agriculture, and education), in domestic human service planning and delivery, in cultural resource preservation, and in their role as advocates for unempowered minorities.

AN 365 Native North American Religions 3c-0l-3sh
An introduction to the indigenous religions of North America and to the peoples who practice these rich and varied approaches to the sacred. This course not only examines major religious themes and dimensions (myth, ritual, ethics, etc.) but includes an historical perspective on North American Indian lifeways. This perspective involves discussion of the clash with Euro-American values and contemporary native religious responses to social crisis and change. [Also offered as RS365; may not be taken for duplicate credit]

AN 401 Social and Cultural Change 3c-0l-3sh
Prerequisite: AN110 or SO151
Exploration of current theoretical perspectives on social and cultural change. Special attention given to "planned change" at the local or regional level.

AN 415 Cultural Resource Management 3c-0l-3sh
Prerequisites: AN244 or consent of the instructor
Provides an understanding of how cultural resources are being preserved and managed under current American laws and regulations with particular emphasis on historic properties, such as historic buildings and archaeological sites. Case studies and field trips are incorporated so that students gain a thorough understanding of key problems and issues in historic preservation and cultural resource management.

AN 420 Cultural Ecology 3c-0l-3sh
Prerequisites: AN110 or AN211
Introduces the student to the field of ecological anthropology by exploring the concept of the ecosystem in relationship to varying human adaptive strategies. Illustrates the importance of understanding man-environment interactions both in studying the developing world and in investigating the past.

AN 444 Medical Anthropology 3c-0l-3sh
Prerequisites: 9 credits in anthropology or permission
Focuses on the study of human confrontation with disease and illness and on the adaptive arrangements made by various human groups for dealing with these dangers. Health and disease are viewed from a broad array of micro and macro perspectives, e.g., evolutionary, ecological, and psychosocial. Designed for nursing and social work students as well as social and biological sciences students.

AN 456 Field Research Methods 3c-0l-3sh
Prerequisite: 9 credits in anthropology
Examination of methods and practice of sociology and anthropology in the areas of qualitative and quantitative methods. Concentrates upon the development of field notes, interviewing techniques, participant observation, etc. Qualitative methods of sampling and analysis will include theoretical sampling and analytic induction. Brief background research into community, organizational, and group structure will also be emphasized.

AN 480 Anthropology Seminar var-1-3sh
Prerequisite: 9 credits in anthropology or permission
A seminar approach to the integration of the fields of anthropology. Designed to assist the advanced student in understanding the nature of anthropology, the major theoretical issues, and the history of intellectual development.

AN 481 Special Topics in Anthropology 3c-0l-3sh
Focuses on specialized topics in anthropology which are not included among regular course offerings.

AN 482 Independent Study var-1-3sh
An opportunity for students to engage in an in-depth analysis of some topic through consultation with a faculty member. Some kind of semester project is ordinarily expected.

AN 483 Readings in Anthropology var-1-3sh
Directed readings on special topics in anthropology. Instructor guides selection of readings.

AN 493 Internship in Anthropology var-3-12sh
Prerequisite: Permission of the instructor
The course is designed to offer students practical experience in any of the specialized fields of anthropology (physical, social-cultural, archaeology, or linguistics). Each student develops objectives in consultation with a particular departmental faculty member who is supervising the internship. Detailed field notes and a major paper based on the experience are required.

AR: Art (Studio)
Department of Art
College of Fine Arts

AR 100 Arts of the Twentieth Century 1c-3l-3sh
Designed to expand student response to visual, aural, and kinetic art forms of this century with special emphasis on recent decades. The course includes lecture, studio, and field experiences.

AR 111 Figure Drawing 0c-6l-3sh
A foundation course in drawing, including a study of the structure of drawing and composition with a variety of media and subject matter.

AR 112 Fundamentals of Drawing 0c-6l-3sh
A course which seeks to integrate basic principles and fundamentals of drawing and design.

AR 113 Three-Dimension Design 0c-6l-3sh
Basic elements and principles of design are studied. A course in design in three dimensions.

AR 114 Color and Two-Dimensional Design 0c-6l-3sh
Focuses on the consistent properties of color and the manner in which two-dimensional design can be organized. Specific attention is given to the complex interactions of color within two-dimensional design.

AR 120 Principles of Design 0c-4l-2sh
Principles of design and color are studied and applied to a crafted object. Major emphasis on aesthetic quality inherent in designing with materials.

AR 211 Painting 0c-6l-3sh
An introductory course in painting in which a variety of materials, techniques, and approaches are explored.

AR 213 Woodworking: Function and Form 0c-6l-3sh
Involves the study of woodworking and furniture design as it relates to the individual designer-artist. Students will experience a formal background in both woodworking technique and the application of design.

AR 214 Ceramics 0c-6l-3sh
A general introduction to the techniques and aesthetics of clay. The student will work both at the wheel and with hand building methods.

AR 215 Sculpture 0c-6l-3sh
Introductory course in sculpture with emphasis on study of form as well as visualizing in the third dimension.

AR 216 Basic Metals 0c-6l-3sh
Introduction to metal work with emphasis upon creation of functional and nonfunctional art objects. Approached from the viewpoint of beginner learning basic processes of metal fabrication.

AR 217 Printmaking 0c-6l-3sh
Introduction to basic techniques of production of fine prints including work in relief, intaglio, lithograph, and serigraph processes.

AR 218 Graphic Design 0c-6l-3sh
Students explore various techniques and their application to such commercial art projects as package design, trademark, and other design problems. Lettering is stressed, both instant type and hand lettering.

AR 219 Fibers 0c-6l-3sh
Provides students with introductory working knowledge in design and execution of projects in non 4/harness loom weaving and related fabric areas. Other fiber techniques, including handmade paper, available for students to explore as desired.

AR 421 Advanced Drawing 0c-6l-3sh
Prerequisites: AR111 and 112
Designed to meet the needs of the student who has some background in the field. Problems of composition, two- and three-dimensional relationships, and surface are on an individual basis. (Offered as AR321 prior to 1993-4)

AR 451 Advanced Woodworking: Function and Form 0c-6l-3sh
Prerequisite: AR213
Offers advanced training and skills involving the study of contemporary furniture design and woodworking. Emphasis on a technical and aesthetic point of view.

AR 452 Advanced Ceramics 0c-6l-3sh
Prerequisite: AR214
Continued exploration of the field of ceramic production, along with kiln firing and glaze formulation.

AR 453 Advanced Sculpture 0c-6l-3sh
Prerequisite: AR215
Gives the student an opportunity to pursue independent study in sculpture. Materials and processes will be individually chosen and the work related to broadening concepts.

AR 454 Advanced Painting 0c-6l-3sh
Prerequisite: AR211
Individual experimentation and exploration by the painter and investigation of the various technical approaches.

AR 455 Advanced Graphic Design 0c-6l-3sh
Prerequisite: AR218
Stresses advanced techniques in layout and illustration. The student explores ideas, such as creation of trademarks and how products are designed. Layouts are analyzed as to their quality. Package design is studied.

AR 457 Advanced Printmaking 0c-6l-3sh
Prerequisite: AR217
Student elects to study one of the printmaking processes in greater depth and works toward development of own techniques, working processes, and ideas.

AR 459 Advanced Fibers 0c-6l-3sh
Prerequisite: AR219
Provides student with a working knowledge in design and execution of projects in weaving and related areas. Other fiber techniques, including handmade paper, will be available for the students to explore as desired.

AR 460 Advanced Metals 0c-6l-3sh
Prerequisite: AR216
Design and processes associated with art of metal are given greater concentration. The developing artist is encouraged to investigate, in depth, one or more of the metal arts as an extension of the basic course.

AR 481 Special Topics var-1-3sh
May provide an in-depth study of a narrowly defined area of the discipline. Subject matter may change with repeated offering of the course. May be repeated for credit.

AR 482 Independent Study var-1-12sh
An opportunity to pursue special interests beyond the scope of regular class offerings. Permission of the instructor and approval of the department chairperson are required.

AR 493 Internship var-3-12sh
Designed for art majors who wish to receive practical experience working within professional situations which relate to the student's artistic and occupational goals.

BC: Biochemistry
Biochemistry Program
College of Natural Sciences and Mathematics

BC 301 Biochemistry I 3c-0l-3sh
Prerequisites: BI105 and CH232
Introduction to biochemistry emphasizing the structure and function relationships of proteins, enzymes, and vitamins, bioenergetics, and the metabolism of carbohydrates and lipids.

BC 302 Biochemistry II 3c-0l-3sh
Prerequisite: BC301
Continuation of BC301 concerning the metabolism of nitrogen, amino acids, nucleotides, and nucleic acids and the function of cell membranes, hormones, and specialized tissues.

BC 311 Biochemistry Laboratory I 0c-4l-1sh
Prerequisites: BI105 and CH232
A companion to BC301 including experiments in photometry, enzyme kinetics and purification, lipid isolation and characterization, electron transport in respiration and photosynthesis, and use of radioisotopes.

BC 312 Biochemistry Laboratory II 0c-4l-1sh
Prerequisite: BC311
A companion to BC302 including experiments in membrane characterization, properties of amino acids, isolation and function of nucleic acids, and synthesis of proteins and nucleic acids.

BC 480 Biochemistry Seminar I 1c-0l-1sh
Prerequisites: BC302 and 312
Discussion of recent trends in biochemical thought. Oral and written reports on assigned readings, library or laboratory research. Guest lecturers. The combination BC480 and BC490 counts as one writing-intensive course

BC 481 Special Topics in Biochemistry 3c-0l-3sh
Prerequisites: BC302 and 312
A lecture-discussion course of recent biochemical topics or those of unique interest. Topic and instructor to change annually.

BC 482 Independent Research in Biochemistry var-1-3sh
Prerequisites: BC302 and 312
Student conducts a research project in any field of biochemistry. Work supervised by faculty. Does not involve regular class or lab hours. Enrollment by permission only.

BC 490 Biochemistry Seminar II 1c-0l-1sh
Prerequisites: BC302, 312, and 480
Discussion of recent trends in biochemical thought. Oral and written reports on assigned readings, library or laboratory research. Guest lecturers. The combination BC480 and BC490 counts as one writing-intensive course.

BE: Business Education
Department of Office Systems and Business Education
College of Business

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

BE 101 Microbased Computer Literacy 3c-0l-3sh
An introductory course designed to provide students with a fundamental understanding of computers. The course familiarizes students with the interaction of computer hardware and software. Emphasis is placed on the application of microcomputers, the use of productivity software (word processing, spreadsheet management, file and data base management), and the social and ethical aspects of the impact of computers on society.
Note: This course is co-listed as CO101 and IM101. Any of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

BE 111 Foundations of Business Mathematics 3c-0l-3sh
Develops an understanding of numbers and knowledge of fundamental concepts in arithmetic and algebra in the solution of common and advanced problems encountered in business by the businessperson and consumer. Topics illustrating and emphasizing the application of business mathematics include methods used to compute interest discount, partial payments, discounting of notes and drafts, depreciation, amortization, sinking fund redemptions, effective rate of interest, and preparation of statistical data.

BE 131 Keyboarding and Document Formatting 3c-0l-2sh
Emphasis on development of correct techniques in typewriting, introduction to basic styles of business letters, simple tabulations, and simple manuscripts; specific standards of speed and accuracy are required. (Title prior to 1989 was BE131: Principles of Typewriting.)

BE 132 Advanced Keyboarding and Document Formatting 3c-0l-3sh
Prerequisite: 2.0 GPA in BE131 or credit by examination
Emphasis on further development of speed, accuracy, and production ability; includes business letters with special features, business reports, business forms, rough drafts, manuscripts. (Title prior to 1989 was BE132: Intermediate Typewriting.)

BE 134 Keyboarding 1c-0l-1sh
Exception. This course is open to students in all colleges without restriction. A class designed to provide students with the fundamental skills to keyboard information quickly and accurately in fourteen one-hour sessions. It is intended for the student who does not require the additional skills included in keyboarding and document formatting, such as letter formats, manuscript typing, and tabulation. Recommended for students in computer science, journalism, management information systems, criminology, etc.

BE 250 Electronic Office Procedures 3c-0l-3sh
Prerequisite: BE131 or equivalent
A study of the theory and practice of the systems in an electronic office: records management, office environment, communication transmittal systems, reprographics, and office procedures. (Branch campus course only. May not be used as a substitute for BE264)

BE 260 Alphabetic Shorthand Theory 3c-0l-3sh
Basic principles of alphabetic shorthand with emphasis on mastery of shorthand theory, punctuation, grammar, and spelling. "New matter" dictation will be introduced during the last few weeks of class. The alphabetic system taught will vary

BE 261 Shorthand Theory 3c-0l-3sh
An introductory course in the basic principles of Gregg Shorthand, Centennial Edition

BE 262 Shorthand Dictation and Transcription 3c-0l-3sh
Prerequisites, BE131, BE261
Major objectives are to review and strengthen the student's knowledge of principles of Gregg Shorthand, Centennial Edition, to build shorthand-writing speed and to build transcription skills. (Title prior to 1989 was BE262: Shorthand Dictation.)

BE 264 Office Procedures 3c-0l-3sh
Prerequisite: BE131 or equivalent
Advanced study of theory and practice in activities common to office records management; handling of mail; telephone and telegraph services; receiving callers; writing reports; dictation and transcription equipment; bank, financial, and legal transactions; shipping and receiving services; reference books; etc.

BE 273 Word Processing Applications 3c-0l-3sh
Prerequisite, BE131 or equivalent
In this course students will develop a high degree of proficiency in the use of word processors. Emphasis is on machine operations and production skills in formatting, text editing, and understanding word processing concepts. (Branch campus course only. May not be used as a substitute for BE/CO/IM101)

BE 311 Methods and Evaluation in Business and Marketing Education I 3c-0l-3sh
Prerequisites: General Psychology, Educational Psychology, and completion of the freshman and sophomore courses in the student's major areas
Includes general methods of teaching and evaluation plus methods and evaluation in basic business courses. Unit plans, lesson plans, and unit tests are emphasized. Techniques and procedures of teaching and classroom management are studied. Includes units in vocational education such as advisory committees, adult education, and federal legislation for funding.

BE 312 Methods and Evaluation in Business Education II var-1 to 3sh
Prerequisite: BE311 or DE410
Covers three sections of special methods and evaluation in office technologies: secretarial, accounting, and data processing. Objectives, planning, evaluating, and skill building are studied. Media and facilities for instruction are examined. Students elect sections needed for certification

BE 482 Independent Study var-3sh
Prerequisite: Consent of departmental chairperson and dean, College of Business
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member.

BI: Biology
Department of Biology
College of Natural Sciences and Mathematics

BI 103 General Biology I 3c-2l-4sh
Prerequisite: Non-Biology majors only
A basic introduction to ecology, biochemistry, and cell biology, genetics, and evolution.

BI 104 General Biology II 3c-2l-4sh
Prerequisites: BI103 General Biology I, Non-Biology majors only
A basic introduction to plant and animal physiology, neurobiology, animal behavior, and plant and animal reproduction and development

BI 105 Cell Biology 3c-2l-4sh
Introductory course to increase depth of beginning student's understanding of structural and functional development plus evolutionary aspects of cell concept.

BI 110 Plant Biology 3c-4l-5sh
Prerequisite: BI105 or special permission
Plant structure, function, development, recognition and grouping, environmental relationships, and economic importance of plants considered

BI 114 Environmental Science 3c-0l-3sh
Prerequisite: Non-Biology majors only
An introduction to environmental science with an emphasis on human impacts. The course uses an interdisciplinary approach to the consideration of population growth, pollution, preservation of species, and establishment of public policy. Students will learn basic principles in ecology as the basis for understanding problems of the environment

BI 115 Biotic Diversity of North America 3c-0l-3sh
Prerequisites: Non-Biology majors and non-Biology minor only
An introduction to the biological diversity of North America from Barrow, Alaska, to Tehuantepec, Mexico. All major aquatic and terrestrial biomes occurring in North America will be examined with regard to plant forms, animal composition, and environmental (abiotic) conditions

BI 120 Animal Biology 3c-4l-5sh
Prerequisite: BI105 or special permission
Morphology, physiology, embryology, ecology, taxonomy, social, and economic importance of animals; consideration of principles applicable to a correlation of classical with present-day zoology.

BI 150 Human Anatomy 2c-3l-3sh
Prerequisite: Non-Biology majors only
Study of the functional systematic anatomy of the human. Lab studies center on nonhuman mammals whose anatomy is then related to the human condition.

BI 151 Human Physiology 3c-2l-4sh
Prerequisites: BI105, Non-Biology majors only
Course deals with acquiring, through lecture presentations and laboratory experiments, an understanding of the basic functions and control of the major organ systems of the human body. Organ systems examined include the following: muscular system, cardiovascular system, respiratory system, endocrine system, renal system, digestive system, reproductive system, and nervous system.

BI 155 Human Physiology and Anatomy 3c-3l-4sh
Prerequisite: Non-Biology majors only (Food and Nutrition, Home Economics Education, Physical Education, and Safety Sciences majors)
Study of structure and function of the human body. Emphasis is on normal function, with particular attention to functional anatomy, control mechanisms, and interrelationships among systems. Laboratory studies will include experimentation and dissection. For students with little or no science background.

BI 160 Biology of Aging 3c-0l-3sh
An examination of the biological changes that occur during the aging process in humans, including discussion of recent theories on the causes of aging.
Note: This course does not fulfill Biology major requirements.

BI 232 Fundamentals of Microbiology 2c-3l-3sh
Prerequisites: CH101 or equivalent, Non-Biology majors only (food and nutrition and home economics education majors)
Study of microorganisms and the role they play in water, food disease, and infection. Food spoilage, poisoning, and disease are emphasized. General methods and techniques are emphasized in the laboratory.

BI 241 General Microbiology 2c-3l-3sh
Prerequisites: Non-Biology majors only (nursing and respiratory therapy majors), BI105, CH101, or equivalent
Study of microorganisms and the role they play in water, soil, food, and infection. Microbes and disease will be emphasized. Standard methods and techniques are emphasized in laboratory.

BI 251 Field Botany 2c-3l-3sh
Prerequisites: BI104 and BI110
The collection, preservation, identification, and distribution of selected herbaceous and woody plants of western Pennsylvania. Emphasis on taxonomic principles, the use of keys and manuals, and the recognition of local flora.

BI 252 Field Zoology 2c-3l-3sh
Prerequisite: BI120
Field natural history of vertebrates; identification, collection, and preservation techniques.

BI 261 Ornithology 2c-3l-3sh
Prerequisites: BI105 or BI103 and 104
A study of birds of the region. Indoor laboratory as well as early morning and possibly weekend field trips required.

BI 262 General Entomology 2c-3l-3sh
Prerequisite: BI120
Morphology, anatomy, ecology, taxonomy, and economic and public health importance of insect orders, particularly those of Western Pennsylvania; student collection and field trips required

BI 263 Genetics 2c-3l-3sh
Prerequisites: BI110 or 120 and CH231
Deals with the distribution and function of the hereditary material; special emphasis on microbial, viral, and molecular genetics.

BI 265 Human Genetics 3c-0l-3sh
Prerequisite: Non-Biology majors only
Behavior of genes in man, as individuals and as populations, will be considered through pedigree studies, linkage analysis, chemical structure of proteins, and cytogenetic correlations. Emphasis on facts and principles which relate to man's growing social, ethical, and political problems.

BI 269 Bioethics and Coevolution 3c-0l-3sh
Discussion and exploration of the coevolution of man and nature. Areas covered include the concepts of coevolution, bioethics, resource utilization, and possible future lifestyles. Designed for majors and nonmajors.

BI 271 Evolution 3c-0l-3sh
Prerequisite: One year Biology
Historical development of evolutionary thought; evidence and operational mechanisms involved; origin and phylogenetic relationships of biological groups.

BI 272 Conservation of Plant and Animal Resources 2c-3l-3sh
Prerequisites: BI105 or BI103 and 104
A study of accepted practices in soil, water, forest, and wildlife conservation. Saturday field trips.

BI 273 Introduction to Rocky Mountain Ecology var-4sh
An introductory course intended primarily for those not familiar with the Rocky Mountains. Flora and fauna of each of the life zones will be described, collected, and identified. Interactions among the various elements of these ecosystems will be considered. This course will be given in a wilderness area. Primitive accommodations allow the student the opportunity to enjoy the wilderness area as much as possible. Study takes place in Wyoming. Tents, food, horses, etc., are provided by a professional outfitter. Offered only in the summer. No prerequisites.

BI 310 Applied Entomology and Zoonoses 2c-3l-3sh
Prerequisite: BI120 or permission
Study of the measures for abatement or control of arthropods, rodents, birds, and other disease vectors of public importance; selection, chemistry, formulation, and safe application of insecticides, rodenticides, and fumigants; pesticiding equipment; application of biological and other measures of control.

BI 311 Environmental Biology 3c-3l-4sh
Prerequisites: Restricted to Elementary Education and Earth Science Education majors only
Laboratory and field course providing basic knowledge in biology and its practical implications. Physical and biological aspects of the environment are studied.

BI 321 Environmental Protection I 2c-3l-3sh
Prerequisites: BI105, CH112, and permission of instructor, Environmental Health majors only
Considers the impact of important components of the physical environment on health and deals with principles and methods for identification, evaluation, and control of such health hazards. Major attention to principles and methods of epidemiological investigation. Major credit only for environmental health majors.

BI 322 Environmental Protection II 2c-3l-3sh
Prerequisites: BI321, Environmental Health majors only
Subjects receiving attention include water and food supplies, domestic and industrial sewage and wastes, housing, accidents, community air pollution, domestic and industrial poisons, ionizing radiations, occupational health hazards.

BI 331 Animal Developmental Biology 2c-3l-3sh
Prerequisite: BI120
Comparative and molecular development of vertebrate animals are the major considerations. General principles of development are illustrated using vertebrate, invertebrate, and plant materials.

BI 350 Cellular Physiology 2c-3l-3sh
Prerequisite: CH231
Topics include cell membrane systems, bioenergetics, and information processing systems as well as growth and differentiation of cells and their organelles. Complements plant and animal physiology and biochemistry.

BI 352 Comparative Animal Physiology 2c-3l-3sh
Prerequisites: BI120, CH231
Comparative study of homeostatic mechanisms and systems in animals and their relation to fundamental chemical and physical events in cells.

BI 360 Medical Mycology 2c-3l-3sh
Prerequisite: BI105
A study of the mycology of pathogenic fungi. Consideration will include sources of infection, distribution, symptomatology, diagnosis, prognosis, immunology, and treatment. Pathogens are used in the course, and emphasis is placed upon actual laboratory technique and procedures.

BI 361 Microbiology 2c-3l-3sh
Prerequisites: BI105, CH231
Introduction to morphology, physiology, and ecology of procaryotic organisms. Importance of microorganisms in basic and applied research, economics, infection, and immunology are discussed.

BI 362 Ecology 2c-3l-3sh
Prerequisites: BI110, 120
Study of interrelations and adaptations of organisms; includes consideration of physical and biotic environmental factors. Field trips.

BI 364 Immunology 2c-3l-3sh
Prerequisites: BI361, CH232, or by permission
Physical and chemical properties of antigens and antibodies; nature of antigen-antibody interactions; mechanism of antibody formation; and immune reaction and disease. Lab employs serological techniques.

BI 401 Laboratory Methods in Biology and Biotechnology 2c-4l-3sh
Prerequisite: CH351
Theory and practice in a number of major analytical and preparative techniques currently in use in physiology, molecular biology, and biotechnology

BI 420 Biology of Higher Invertebrates 2c-3l-3sh
Prerequisite: BI120
A phylogenetic overview of the higher invertebrates, Annelida through lower Chordata. A systematic approach on functional morphology and microstructure, behavior and physiology, under an evolutionary umbrella. Laboratory sessions offer additional research opportunities.

BI 425 Herpetology 2c-3l-3sh
Prerequisite: BI120
A comprehensive survey of the classes Amphibia and Reptilia, including their classification, structure, origin, evolution, phylogenetic relationships, distribution, and natural history. Special emphasis is placed on the herpetofauna of Pennsylvania

BI 432 Comparative Vertebrate Anatomy 2c-3l-3sh
Prerequisite: BI120
Discussion of anatomy of representative vertebrates from a comparative point of view. Stresses major organizational changes observed in vertebrate history.

BI 453 Plant Physiology 2c-3l-3sh
Prerequisites: BI110, CH231
Studies physiological processes occurring in plants considered in relation to growth, development, and ecology of plants.

BI 463 Limnology 2c-3l-3sh
Prerequisites: BI362
An investigation into the physical, chemical, and biological aspects of inland waters and their interrelationships. In the laboratory the student will gain experience in the techniques involved in aquatic sampling and the analysis of data. (Saturday or Sunday labs may be required.)

BI 466 Principles of Virology 3c-0l-3sh
Prerequisite: BI263 or equivalent course in Genetics, or CH351 or equivalent course in Biochemistry, or permission of instructor
Topics include structure, classification, assay, and transmission of viruses; methods used in the study of viruses; viral replication, gene expression, and gene regulation, host-viral interactions and subviral pathogens.

BI 475 Mammalogy 2c-3l-3sh
Prerequisite: BI120
A general discussion of mammals emphasizing systematics, distribution, and structural and functional modifications related to evolution of this group. Lab work samples numerous techniques that can be applied to mammalian biology.

BI 476 Parasitology 2c-3l-3sh
Prerequisite: BI120
Structure, physiology, ecology, life cycles, pathology, and treatment of parasitic protozoa and flatworm and roundworm species of man. Dissection of hosts for parasites.

BI 478 Mycology 2c-3l-3sh
Prerequisite: BI110
Involves a study of the systemics, morphology, and physiology of the kingdom Mycetetae with emphasis on economically important and experimentally useful organisms.

BI 480 Biology Seminar 1c-0l-1sh
Discussion of recent trends in biological thought and research. Students report on assigned readings and/or personal research.

BI 481 Special Topics var-1-3sh
This course varies from semester to semester covering diverse topics in specific areas of biology.

BI 482 Independent Study var-1-3sh
Student investigates independently any field of biology in which there is interest. Work is supervised by a faculty member but does not involve regular class or laboratory hours. Enrollment by permission only; 2.5 GPA overall and in major courses required.

BI 493 Biology Internship var-6-12sh
Prerequisites: Biology major with at least 57 semester hours, 2.5 overall QPA, and permission of the director of internships and the chairperson

Selected students have opportunity, under department supervision, to gain off-campus practical experience in area of interest. Only six credits may be applied toward major; total number of credits will be decided in consultation involving student, his/her adviser, and director of internships.

BL: Business Law
Department of Finance and Legal Systems
College of Business

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

BL 235 Introduction to Business Law 3c-0l-3sh
Introduction to legal systems, torts, contracts, and sales law.

BL 336 Law of Business Organizations 3c-0l-3sh
Prerequisite: BL235
A study of the law dealing with commercial paper, agency, partnerships, corporations, and bankruptcy.

BL 337 Consumer Law 3c-0l-3sh
Nature of law as it pertains to the consumer. Attention to consumer protection relationships; real and personal property; credit; environmental law; law pertaining to employment, landlord-tenant relationships; product liability; insurance; and family law.

CE: Counselor Education
Department of Counseling, Adult Education, and Student Affairs
College of Education

CE 250 Developing Interpersonal Relationship Skills 1c-0l-1sh
Teaches interpersonal relationship skills: listening, communicating, group dynamics, decision making, leadership, assertiveness, time use management, problem solving, and conflict resolution. Open to all undergraduates.

CE 253 Counseling in School Settings 3c-0l-3sh
An elective course designed to provide in-service teachers and school personnel, other than counselors, with a basic understanding of the knowledge, information, and skills appropriate to counseling with individuals and groups.

CH: Chemistry
Department of Chemistry
College of Natural Sciences and Mathematics

CH 101 College Chemistry I 3c-2l-4sh
The basic fundamental principles and concepts of inorganic chemistry are developed from the standpoint of atomic and molecular structure with illustrative examples from descriptive chemistry. The laboratory portion of the course illustrates physical and chemical properties in a qualitative and quantitative manner. The course is designed for selected majors within the College of Health and Human Services.

CH 102 College Chemistry II 3c-2l-4sh
Prerequisite: CH101
The basic fundamental principles and concepts of organic and biochemistry are developed. Deals primarily with structural features of organic compounds, the chemistry of functional groups, and practical examples and uses of organic compounds. The laboratory portion illustrates properties and reactions of representative organic compounds. The course is designed for selected majors within the College of Health and Human Services.

CH 111 General Chemistry I 3c-3l-4sh
Lecture-discussion of principles of chemistry, including theory and applications. The lab illustrates principles discussed. Topics discussed include scientific measurements, simple definitions and concepts, the mole, stoichiometry, gas laws, electronic structure of the atom, bonding, thermochemistry, and descriptive chemistry of the elements.

CH 112 General Chemistry II 3c-3l-4sh
Prerequisite: CH111
Continuation of General Chemistry I. Topics discussed include the solid and liquid state, solutions, kinetics, equilibria, acids and bases, solubility equilibria, thermodynamics, electrochemistry, and descriptive chemistry of the elements.

CH 113 Concepts in Chemistry 3c-3l-4sh
Introductory course for chemistry majors. Topics covered include atomic theory, an introduction to chemical reactions, stoichiometry, thermochemistry, chemical bonding, molecular geometry, kinetic-molecular theory of gases, the liquid and the solid states, and solution theory.

CH 114 Basic Inorganic Chemistry 3c-3l-4sh
Prerequisite: CH113
Topics include chemical kinetics, equilibrium and thermodynamics, acids and bases, electrochemistry, coordination chemistry, and descriptive chemistry of selected elements.

CH 116 Basic Inorganic Chemistry 3c-3l-2sh
Prerequisite: CH111 and CH112
Required for chemistry majors who have taken CH111 and CH112. A systematic study of the chemistry of the elements will be presented in both the lecture and the laboratory. Also included will be the chemistry of coordination compounds. This course starts at the beginning of the second half of the spring semester and is taught concurrently with CH114.

CH 231 Organic Chemistry I 3c-4l-4sh
Prerequisite: CH112 or 114
A study of compounds of carbon, with special emphasis on structure-reactivity relationships. Laboratory work emphasizes methods of separation and purification of organic compounds.

CH 232 Organic Chemistry II 3c-4l-4sh
Prerequisite: CH231
A continuation of Organic Chemistry I with an introduction to spectroscopic techniques. Laboratory work emphasizes the synthesis of representative compounds.

CH 255 Biochemistry and Nutrition 3c-0l-3sh
Prerequisite: CH102
Course for Home Economics majors; studies chemistry and biological function of biologically active compounds with respect to nutritional requirements.

CH 301 Chemistry Seminar 1c-0l-1sh
Discussion of current technical literature and current research problems of staff. Lectures by outside chemists and student presentations. Open to junior or senior chemistry majors and to others by permission of the instructor.

CH 303 Glassblowing Techniques 0c-2l-1sh
Introduces science student to techniques necessary for construction and modification of scientific glass apparatus. Limited to junior and senior science majors and others by permission of instructor.

CH 321 Quantitative Analysis 3c-4l-4sh
Prerequisite: CH112 or CH114
Theory and practice of quantitative analysis, including gravimetric and volumetric analysis; special emphasis on perfecting student's laboratory techniques and application of general chemical knowledge through problem solving.

CH 322 Instrumental Analysis 3c-4l-4sh
Prerequisite: CH341
Modern instrumental methods of chemical analysis. Student learns theory behind the instrument, principles of operation, interpretation of data obtained, and limitations of methods.

CH 323 Analytical Methods 3c-4l-4sh
Prerequisites: CH112 and non-Chemistry major
Principles of precipitation, acid-base, oxidation-reduction, and equilibria are applied to problem solving and to laboratory determinations; instrumental methods of analysis, such as colorimetry, atomic absorption and flame emission, gas chromatography, etc.

CH 324 Forensic Analysis 3c-4l-4sh
Prerequisites: CH111, 112, 231, 232
Theory and practice of modern quantitative and instrumental analysis, especially as applied to forensic samples in the crime lab. Principles of instrument operation and data interpretation will be stressed.

CH 331 Organic Molecular Structure Determination 4c-var-3sh
Prerequisites: CH231-232 (CH232 may be taken concurrently)
Gives the student experience in systematic identification of various classes of organic compounds by both chemical and physical methods.

CH 335 Advanced Organic Chemistry 3c-0l-3sh
Prerequisites: CH232 and CH341
Selected topics of current interest covered. Possible topics include reaction mechanisms, molecular spectroscopy, stereochemistry, natural products, heterocyclics, polymer chemistry, and organic synthesis.

CH 340 Physical Chemistry for the Biological Sciences 3c-0l-3sh
Prerequisites: MA122, 124, 128, and PY112 or 132; CH232
One semester course for Biochemistry and Biology majors. Chemical thermodynamics, equilibria, kinetics; quantum mechanics; and spectroscopy especially as applied to biomechanical systems.

CH 341 Physical Chemistry I 4c-0l-4sh
Prerequisites: MA122, 124, or 128 and PY112 or 132; CH112 or 114
Chemical thermodynamics with applications to solutions, phase, and chemical equilibria-kinetic theory.

CH 342 Physical Chemistry II 3c-0l-3sh
Prerequisite: CH341
Study of solids, liquids, surfaces, chemical kinetics, electrochemistry, atomic and molecular structure.

CH 343 Physical Chemistry Laboratory I 0c-3l-1sh
Prerequisites: CH321, 341
Experiments illustrating application of fundamental laws to actual systems. Carries writing-intensive credit.

CH 344 Physical Chemistry Laboratory II 0c-3l-1sh
Prerequisites: CH342, 343
Extension of Physical Chemistry Laboratory I, experiments related to chemical kinetics, molecular spectroscopy, and other topics of physical chemistry.

CH 351 Biochemistry 4c-0l-4sh
Prerequisite: CH231
Study of chemistry and biological functions of carbohydrates, lipids, proteins, minerals, vitamins, and hormones.

CH 376 Radiochemistry 4c-var-3sh
Prerequisite: CH322
Study of basic aspects of nuclear structure, phenomena of radioactive isotopes, and chemical effects of such isotopes. Concurrent lab work utilizing instruments for detection and measurement of radioactive nuclides used in chemical experimentation.

CH 410 Advanced Inorganic Chemistry Laboratory 0c-3l-1sh
Prerequisite: CH322 Instrumental Analysis
A laboratory course in which the techniques used in the synthesis and characterization of inorganic compounds will be explored. Emphasis will be placed on the preparation of a wide variety of inorganic compounds and the methods by which they are identified and characterized.

CH 411 Advanced Inorganic Chemistry 3c-0l-3sh
Prerequisite: CH341
Gives understanding of advanced theories of atomic structure, chemical bonding, acids and bases, coordination compounds, and selected topics.

CH 412 Advanced Structural and Synthetic Methods in Inorganic Chemistry 2c-2l-3sh
Prerequisites: CH411 and either CH410 or CH322
Advanced techniques used in the synthesis and characterization of inorganic compounds will be explored. In lecture, emphasis will be placed on the theory and application of structural and spectroscopic methods of characterization. In lab, emphasis will be placed on advanced methods of synthesis and structural characterization using representative examples of important classes of inorganic compounds.

CH 421 Advanced Instrumental Analysis 4c-var-3sh
Prerequisite: CH322
Study of modern chemical analysis, using advanced instrumental techniques; emphasis on theory, principles of operation, capabilities, and limitations of advanced analytical instruments used

CH 441 Advanced Physical Chemistry 3c-0l-3sh
Prerequisite or corequisite: CH342
Study of fundamental ideas of quantum and statistical mechanics, molecular structure, and other topics of current interest.

CH 493 Internship in Chemistry var-4 to 9sh
Prerequisites: CH113, 114, 231, 232, 321, 341, and departmental approval
Full-time involvement in an actual "on-the-job" situation in an industrial laboratory under the tutelage of a selected preceptor. A department faculty member will work closely with the student and preceptor and will assume responsibility of making the final evaluation and assigning a grade.

CH 498 Problems in Chemistry var-1 to 2sh
Prerequisite: Permission of chairperson
Course of independent study on selected problems, including lab work, library reading, and conferences with staff member. A minimum of four hours per week required per credit

CL: Critical Languages
College of Humanities and Social Sciences

Critical Languages are offered in four levels. See program description in the opening section of the College of Humanities and Social Sciences. Specific languages are offered as available

CL 101 - 120 Critical Languages I 3c-0l-3sh
Basic vocabulary and pronunciation in the target language. Oral/aural skills are stressed
CL101 Arabic I
CL102 Chinese I
CL103 Dutch I
CL104 Finnish I
CL105 Hindi I
CL106 Hungarian I
CL107 Italian I
CL108 Japanese I
CL109 Korean I
CL110 Modern Greek I
CL111 Portuguese I
CL112 Russian I
CL113 Swedish I

CL 151 - 170 Critical Languages II 3c-0l-3sh
Prerequisite: Level I or acceptable equivalent
A continuation of the first-semester course. Depending on the language being studied, reading and writing may be introduced at this level
CL151 Arabic II
CL152 Chinese II
CL153 Dutch II
CL154 Finnish II
CL155 Hindi II
CL156 Hungarian II
CL157 Italian II
CL158 Japanese II
CL159 Korean II
CL160 Modern Greek II
CL161 Portuguese II
CL162 Russian II
CL163 Swedish II

CL 201 - 220 Critical Languages III 3c-0l-3sh
Prerequisite: Level II or acceptable equivalent
At this first intermediate level, students will begin to develop a degree of oral proficiency that will vary with the language studied. Reading and writing will be studied in all languages by this level.
CL201 Arabic III
CL202 Chinese III
CL203 Dutch III

CL204 Finnish III
CL205 Hindi III
CL206 Hungarian I
CL207 Italian III
CL208 Japanese III
CL209 Korean III
CL210 Modern Greek III
CL211 Portuguese III
CL212 Russian III
CL213 Swedish III

CL 251 - 270 Critical Languages IV 3c-0l-3sh
Prerequisite: Level III or acceptable equivalent
By the end of this course the student should be able to communicate in simple terms with an educated native speaker on a topic with which the student is familiar. Ability in reading and writing will vary with language
CL251 Arabic IV
CL252 Chinese IV
CL253 Dutch IV
CL254 Finnish IV
CL255 Hindi IV
CL256 Hungarian IV
CL257 Italian IV
CL258 Japanese IV
CL259 Korean IV
CL260 Modern Greek IV
CL261 Portuguese IV
CL262 Russian IV
CL263 Swedish IV

CM: Communications Media
Department of Communications Media
College of Education

CM 101 Communications Media in American Society 3c-0l-3sh
Required of Communications Media majors
Introduction to the evolution, status, and future of communications media. Students explore intrapersonal communication through self-assessment, values clarification, and feedback; interpersonal communication through interviews, observations, case studies, and gaming; and mass communications through the examination of the processes and the technology utilized to disseminate and manage information. Career paths, field applications, professional associations, and the primary literature are investigated.
(Previous title: Survey of Communications Media)

CM 102 Basic Technology 1c-0l-1sh
Prerequisite: CM101
Provides Communications Media majors with the ability to identify, operate, and maintain a variety of audiovisual hardware commonly found in education, business, industry, and allied health professions.

CM 103 Basic Communications Research 1c-0l-1sh
Prerequisite: CM101
An introduction to research as it specifically applies to the field of communications. Major emphasis will be placed on a review of the resource materials pertaining to the area of communications. Also to be included will be a basic understanding of research methodology as it relates to the design and validation of communication devices

CM 200 Images 3c-0l-3sh
Prerequisite: CM101
The course examines the basic visual and aural elements, the strategies and options of techniques, the psychological and physiological implications of creative composition, and the range of media and formats.

CM 271 Beginning Photography 3c-0l-3sh
Prerequisite: CM101 or permission
Working with black-and-white materials, the student learns to operate a camera, develop film, make contact prints and enlargements, and mount prints for display. Ancillary topics are introduced such as filtration, print spotting, flash, and the use of accessory lenses. Student is required to have a 35mm camera, preferably a single-lens reflex, with fully manual focusing and exposure capability.

CM 301 Technology for Learning and Instruction 3c-0l-3sh
Prerequisite: EP202 or permission
Preservice teachers gain competencies in selection, evaluation, and utilization of various instructional technologies. Application of new technologies to teaching and learning will be emphasized, along with performance-based activities in instructional design. A major portion of the course is devoted to the integration of computer-based instructional activities in the school curriculum. Does not count towards credits needed for Communications Media major.

CM 303 Scriptwriting 3c-0l-3sh
Prerequisite: CM101
Required of Communications Media majors
Introduction to the design of media materials and script writing. Style and techniques of writing will be analyzed. Classroom emphasis is on writing, critiques, and revision of designs and scripts. Scripts for audio, still projection, and motion picture and television productions will be written

CM 330 Communications Media in Training and Education 3c-0l-3sh
Prerequisites: CM101, 303
The course reviews the historical growth and philosophies of the design and development of training and education products and processes. The student examines the principal roles and functions of human and material resource professionals for training (performance improvement), education (competency improvement), and development (personal and organizational growth).

CM 335 Consulting Practices in Communications 3c-0l-3sh
Prerequisite: CM101
The course presents the theoretical views and clinical applications of consulting skills and practices associated with and needed by communication professionals. Presented will be the functions and role of the consultant, the client's perspective on consulting, hiring a consultant, ethics in consulting, personal assessment tests, and related literature and models.

CM 375 Mass Media and Behavior 3c-0l-3sh
Prerequisite: PC 101 and junior or senior status
Theory and research on the influence of the mass media on human behavior and attitudes. Topics include: the effects of news and political advertising on public opinion; the effects of racist and sexist portrayals; and the effects of violence and pornography on aggressive behavior. [Also offered as PC 375; may be taken only once.]

CM 390 Practicum in Communications var-1-3sh
Prerequisites: CM 101, written permission
An opportunity with credit for students to make contributions to department and campus media-related facilities and offices including WIUP-TV, WIUP-FM, *Penn*, *Oak*, Public Relations, Media Resources. Repeatable for a maximum of six credits.

CM 395 Career Planning in Communications Media 1c-0l-1sh
Prerequisite: Minimum 20 CM credits
The course serves as a primary skill-building and strategy-seeking experience for the internship program and later career entry and growth. Extensive writing, research, and individual counseling are involved. Travel may be necessary.

CM 403 Writing for Broadcasting 3c-0l-3sh
Prerequisites: CM101, permission of instructor
The course acquaints students with the various techniques used in writing scripts for radio and television and makes them aware of the visual impact of television and the audio impact of radio. Students are made aware of the limitations of television and radio as well as their unique features.

CM 404 Foundations of Broadcasting 3c-0l-3sh
Prerequisites: CM101, permission
Examination of the historical, legal, and economic aspects of broadcasting. Impact of broadcasting on society will be explained as well as the impact of the new technology on our existing broadcasting systems.

CM 405 Radio Production 3c-0l-3sh
Prerequisites: CM101, 200, 403, 404, permission
An introduction to production techniques as they pertain to radio. The student will be exposed to programming, scripting, producing programs, intros, outros, commercials, public service announcements, station identifications, and

promotional announcements. The course will also deal with the interaction of a radio station with national networks and with the real-life concerns of deadlines

CM 430 Analysis of Communication Products and Processes 3c-0l-3sh
Prerequisites: CM330, permission
The course will provide both a framework for action and tools to measure the effectiveness of training and education in human and material resource development programs. The course contains practical theory and problem-focused discussion with students regarding application. Topics include instrument choice or construction, data collection and analysis, interpretation, and alternative presentation strategies of the findings

CM 435 Organizational Development in Communications Media 3c-0l-3sh
Prerequisites: CM330, permission
The course presents the basic methods and approaches for organization, management, and development of human and material resource departments. The topics include the primary activities and roles of an HMRD director, problem-solving functions in reporting to management, characteristics associated with career systems, and special topics

CM 440 Communications Graphics 3c-0l-3sh
Prerequisites: CM101, permission
Provides basic experiences in planning and producing a commonly used television studio, industrial display, and classroom graphics which are applicable in educational, industrial, and medical training programs. Experiences include technical layout and lettering; color; mounting and laminating; copying and reproduction techniques utilizing photography and xerography, photo silk screening and photo sketching.

CM 441 Advanced Communication Graphics 3c-0l-3sh
Prerequisites: CM440, permission
Provides in-depth experience in planning and preparing graphic materials commonly used in the communications profession; graphic materials include design, photosketching, lettering, slide tiling and duplication, preparation of camera-ready art, lithographic film and master layout sheets, professional slide flat production and photocopy, large format transparency production, color key, and color systems.

CM 445 Applications and Techniques of Motion Pictures 3c-0l-3sh
Prerequisites: CM444, permission
A survey of the role that motion picture film production plays in society Major emphasis will be placed on the variety of applications with special consideration given to motion pictures as a tool to support research

CM 449 Basic Audio Recording Techniques 3c-0l-3sh
Prerequisites: CM101, 403, permission
Theory and practice of recording sound, developing an understanding of the language of sound recording as well as the ability to make sound recordings Exposure to recording for various media including radio, music, motion pictures, television, multi-image, and slide and tape production. Material also appropriate for teachers who wish to make use of tape recorder in the classroom. Students will gain hands-on experience through labs and projects to be completed outside of class. Students will be expected to provide an audio tape recorder.

CM 450 Advanced Audio Recording Techniques 3c-0l-3sh
Prerequisites: CM449, permission
Sound recording utilizing advanced techniques and concentrating on specific applications. Student participates in an intensive lab experience utilizing the most advanced equipment available. Emphasis on application, editing, signal processing, and multi-track recording. Student is expected to produce a sound recording for a specific use of professional quality.

CM 451 Television Production 3c-0l-3sh
Prerequisites: CM101, permission
Develops basic skills in television production and direction. Consideration of operating problems of a television studio, as well as functions, limitations, and capabilities of television equipment and facilities.

CM 452 Electronic Field Production 3c-0l-3sh
Prerequisites: CM451, permission
Provides in-depth field experience with portable video equipment and lighting. Students edit programs to broadcast quality.

CM 453 Broadcast News Process 3c-0l-3sh
Prerequisites: CM405, 451, permission
Reporting and presenting radio and TV news programs. Analysis of news and public affairs broadcasting.

CM 454 Broadcast Regulation 3c-0l-3sh
Prerequisites: CM404, permission
This course delves into the areas of law affecting broadcasters. Topics covered are laws pertaining to cable television, station licensing and renewal, political broadcasting, libel, copyright, the right of reply, and privacy. The historical development of the FCC and its jurisdictions will also be examined. Case studies will be discussed along with the relevancy of some laws as they pertain to today's society

CM 455 Television Performance 3c-0l-3sh
Prerequisites: CM451, permission
Provides theory and practice for performing on television. Detailed analysis of a performer's role in a variety of settings.

CM 456 Broadcast Management 3c-0l-3sh
Prerequisites: CM404, permission
Detailed examination of the management decision-making process in radio and television, particular reference to program policies, personnel administration, and community relations.

CM 460 Alternative Systems of Communication 3c-0l-3sh
Prerequisites: CM404, permission
The implications and capabilities of cable systems, the private and industrial utilization of nonbroadcast services, the emergence of satellite CATV networking, and the application of two-way cable response systems.

CM 472 Photography II: The Print 3c-0l-3sh
Prerequisites: CM271, permission
Students will develop camera and print-making skills to the degree that they can produce salon-quality photographic prints. Students will understand the photographic processes utilized in producing a high-quality negative and print to the extent that they can manipulate those processes to communicate an intended message with their photographs Emphasis on camera and print control as well as composition and negative and print manipulation.

CM 473 Creative Darkroom Techniques 3c-0l-3sh
Prerequisites: CM472, permission
Students pursue photographic competencies to a high level of proficiency. Specific topics may vary as photographic technology changes, but typical assignments include high-contrast photography through the use of graphic arts materials, multiple exposures in the camera and in projection printing, making and using paper negatives, and hand coloring of photos.

CM 474 Documentary Photography 3c-0l-3sh
Prerequisites: CM271, 472, permission
Prepares the student to deal with the actions of subjects in both descriptive and interpretive styles. The student is assigned to photograph a variety of local events in a manner that makes the nature of the event evident to the viewer of the photograph The student also learns differences between printing for reproduction and for exhibit. The student is required to have a 35mm camera (preferably a manual exposure single-lens reflex) and a flash unit.

CM 475 Color Photography 3c-0l-3sh
Prerequisites: CM271, 472, permission
An introduction to major techniques and problems of color photography including color temperature of light and color response of films, filtration, negative and reversal film processing, and making color prints from negatives and slides. Includes an introduction to color theory as it applies to photography.

CM 476 Commercial Photography 3c-0l-3sh
Prerequisites: CM271, 471, major status, permission
An introduction to professional studio and location work, including making pictures for advertising, catalogs, publicity, and other commercial purposes. Deals with lighting, backgrounds, and camera use for photographing portraits, products, and architecture. In addition to use of the student's own 35mm camera equipment, the course provides experience with the 4x5-inch view camera. Ability to solve basic algebra problems is required.

CM 477 Slide/Sound Production 3c-0l-3sh
Prerequisites: CM271, 303, 440, 449, and permission
This course is designed to provide advanced students with the theoretical and

practical experiences necessary to be able to plan, design, produce, and present effective slide/tape presentations for use in education, industry, and the allied health professions.

CM 478 Multi-image Production 3c-0l-3sh
Prerequisites: CM271, 303, 440, 449, permission
An advanced production course employing instructional development techniques to emphasize the unique features of multiple image messages primarily through 2x2-inch slides. Scripting, storyboarding, computer programming, and audiovisual production techniques are used in the course project.

CM 480 Independent Study var-1 to 3sh
Prerequisites: Communications Media major only, permission
Students may, with the sponsorship of a department faculty member and consensus of the department, elect an advanced course of study which reflects the academic goals of the department. Exemplary project is intended to extend or combine field knowledge not readily available through other course offerings. Students may take one or more semester hours (40 hours or more of commitment=1 s.h.), and multiple projects are possible; a maximum of 3 s.h are permitted towards a degree program

CM 493 Internship var-6 to 12sh
Prerequisites: Communications Media majors only, junior or senior status, permission
Supervised professional work experience in communications media. Sites reflect the academic goals of the department and are approved and administered by a department coordinator. Location, duties, length of internship, and hours are individually tailored to student career goals. Sites represent wide application of process and technology of communications in business, education, allied health, or other agencies. Students may take 3 or more s.h. per semester (40 hours or more of commitment=1 s.h.), and multiple experiences are possible; a maximum of 3 s.h. of internship and/or field experiences are permitted towards a degree program.

CM 495 Seminar in Training and Development 3c-0l-3sh
Prerequisites: CM Foundation electives, permission
Student research in advanced or specialized topics in human and materials development. Current issues, problems, unique curriculums, or new processes and technology are examined as they impact upon programs, products, and individual career directions.

CO:Computer Science
Department of Computer Science
College of Natural Sciences and Mathematics

CO 101 Microbased Computer Literacy 3c-0l-3sh
An introductory course designed to provide students with a fundamental understanding of computers. The course familiarizes students with the interaction of computer hardware and software. Emphasis is placed on the application of microcomputers, the use of productivity software (word processing, spreadsheet management, file and data base management), and the social and ethical aspects of the impact of computers on society. (Does not count toward Computer Science major. Replaced CO200 in 1989-90.)
Note: This course is co-listed as BE101 and IM101. Any of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

CO 105 Fundamentals of Computer Science 3c-0l-3sh
This is the first course for Computer Science majors. It is required of all Computer Science students and is appropriate for other Natural Sciences and Mathematics students. Topics include the fundamental concepts of computer architecture, algorithm development and analysis, programming languages, software engineering, data organization and representation, and systems software. Hands-on introduction to computer usage with an emphasis on terminology and the underlying connections within the discipline.

CO 110 Problem Solving and Structured Programming 3c-0l-3sh
(For Science, Mathematics, and Computer Science majors, and for others who have a sufficiently quantitative orientation.)
Basic structure of modern digital computers; batch processing vs. interactive time-shared on-line computing; problem analysis and computer solution using flowcharting and the FORTRAN language. Exemption or credit by examination possible.

CO 205 Programming Languages for Secondary Education 3c-0l-3sh
Prerequisite: Education major
Provides an introduction to the three high-level programming languages most commonly used in secondary education: Pascal, LOGO, and BASIC, with particular emphasis on Pascal. Also includes a comparative study of the control structures and data structures present in these three languages. This course is intended to establish a solid foundation to prepare prospective teachers of computing courses K-12. [Note: Previous experience with microcomputers is strongly recommended. Does not count toward a computer science major. Credit toward graduation will not be given if this course is taken after completing six or more credits of computer science courses.]

CO 220 Applied Computer Programming 3c-0l-3sh
Prerequisite: CO110 or equivalent
Structured programming principles and techniques, as implemented through the ANS COBOL language; program design using top-down techniques, group programming projects; program and project documentation; introduction to tape and disk files.

CO 250 Introduction to Numerical Methods 3c-0l-3sh
Prerequisites: CO110, MA102, MA122 or MA123 or MA127
Algorithmic methods for function evaluation, roots of equations, solutions to systems of equations operations, matrix operations, curve fitting, interpolation, numerical integration and differentiation; errors in computation.

CO 300 Assembly Language Programming 3c-0l-3sh
Prerequisite: CO110 or equivalent
Examination of structure and languages of machines; representation of data, addressing techniques, symbolic coding, assemblers, macros, etc.; problem solution using assembly language.

CO 310 Data Structures 3c-0l-3sh
Prerequisite: CO110 or CO220
Basic concepts of data; storage systems and structures; lists, arrays, strings, hashing techniques; searching and sorting techniques, data structures in programming languages; string processing. Programming in a block-structured language.

CO 315 Large File Organization and Access 3c-0l-3sh
Prerequisite: CO220
The organization of large computer files for business systems, information systems, and other applications. Use of COBOL for efficient file access. Evaluation of file access methods. Advanced topics in COBOL.

CO 319 Software Engineering Concepts 3c-0l-3sh
Prerequisite: CO315 or permission of instructor
Includes the collection of tools, procedures, methodologies, and accumulated knowledge about the development of the software life cycle; current methodologies, tools, and techniques being applied to each phase will be discussed in depth with localized exercises given to reinforce learning of concepts.

CO 320 Software Engineering Practice 1c-2d-3sh
Prerequisite: CO319 or permission of the instructor
Planning, design, and implementation of large software systems using software engineering techniques. Students work in project teams on real or realistic software development projects. Credit for either CO 320 or CO 493 may count toward computer science major requirements for graduation, but not both; the other course credits are free electives.

CO 345 Data Communications 3c-0l-3sh
Prerequisites: CO110, CO220, and MA214, 216, 217, or equivalents
Communication of digital data between computers and to and from terminals and other peripherals; computer networks; design project or term paper.

CO 355 Computer Graphics 2c-1l-3sh
Prerequisite: CO310 and junior status
The use of computer graphics hardware and software. An overview of current applications and experience with representative software will introduce current practice. Foundations in primitives, geometry, and algorithms of passive computer graphics are the principal focus of the course. A brief introduction to interactive computer graphics will be included.

CO 360 IBM Job Control Language 1c-0l-1sh
Prerequisite: CO220 or permission of the instructor

Detailed study of the job control language (JCL) of the IBM OS operating system; comparison of OS with the locally available DEC operating system, VAX VMS

CO 362 UNIX and C 3c-0l-3sh
Prerequisites: CO 310 or permission of instructor
Provides a general introduction to UNIX and C including historical roots, current practice, prospects for the future, and hands-on skills. Students will develop understanding of the features, syntax, and "culture" of UNIX and C through lectures, reading, and projects. UNIX and C will be studied both separately and in synergistic combination. Upon completion of the course, students will have immediately practical awareness and some skills and will be provided with a foundation for further coursework in operating systems, compiler construction, and/or graduate study. UNIX is a trademark of Bell Laboratories.

CO 380 Seminar on the Computer Profession 0c-1d-1sh
Prerequisites: Permission (See text below)
Reading, review, and discussion of the current literature of computer science and industry trade journals; effective oral presentations; employment prospects. Should be taken the semester before an internship or the first semester of the senior year. Should not be taken at the same time as CO480.

CO 405 Artificial Intelligence 3c-0l-3sh
Prerequisite: CO310
An introduction to the field of artificial intelligence, i.e., the study of ideas that enable computers to process data in a more intelligent way than conventional practice allows. The course covers many information representation and information processing techniques. Students will explore the underlying theory including matching, goal reduction, constraint exploration, search, control, problem solving, and logic.

CO 410 Processor Architecture and Microprogramming 3c-0l-3sh
Prerequisites: CO300 and CO310
The logical description of computer processor structure (architecture), with emphasis on the microprogramming approach. Project assignments using minicomputer

CO 419 Software Development with Ada 3c-0l-3sh
Prerequisite: CO310
Introduction to the Ada programming language as a tool of the software engineer. Projects will use the advanced programming constructs resident in Ada, including packages, multi-tasking, generic units, exception handlers, and concurrent programming.

CO 420 Modern Programming Languages 3c-0l-3sh
Prerequisites: CO220 and CO310
Comparative study of the properties and applications of a range of modern higher-level programming languages, including Ada, APL, C, LISP, LOGO, Pascal, PROLOG, and SNOBOL. Comparison with older languages such as ALGOL, BASIC, COBOL, FORTRAN, and PL/I

CO 424 Compiler Construction 3c-0l-3sh
Prerequisites: CO300 and CO310
Relates the formal concepts of automata and language theory to the practicality of constructing a high-level language translator. The structures and techniques used in lexical analysis, parsing, syntax directed translation, intermediate and object code generation, and optimization are emphasized

CO 430 Introduction to Systems Programming 3c-0l-3sh
Prerequisites: CO300 and CO310
Concepts and techniques of systems programming with an emphasis on assembly and compilation of user programs. Representation of source language so as to facilitate the needed translation process. Exercises using various computer systems.

CO 432 Introduction to Operating Systems 3c-0l-3sh
Prerequisites: CO300, CO310 or equivalents
Introduction to the principles of operating system design and implementation. Topics include interrupt service, process states and transitions, spooling, management of memory and disk space, virtual storage, scheduling processes and devices, and file systems.

CO 441 Data Base Management 3c-0l-3sh
Prerequisite: CO315
Review of data base concepts. Detailed study of data base management approaches. Comparative study of commercially available data base management systems. Project on the locally available data base systems.

CO 450 Applied Numerical Methods 3c-0l-3sh
Prerequisites: CO250, MA171, and MA241, or equivalents
Polynomial approximations using finite differences, with applications in numerical integration and differentiation. Numerical solution of initial value ordinary differential equations. The APL language will be introduced and used, along with FORTRAN, in programming selected algorithms.

CO 451 Numerical Methods for Supercomputers 3c-0l-3sh
Prerequisites: MA121 and MA122, or MA123 or MA127, MA171, CO250
Super computers make use of special computer architectures—vector and parallel processors—in order to achieve the fastest processing speed currently available. Students will be introduced to these features and will learn how numerical algorithms can be constructed to exploit supercomputers' capabilities. Students will gain practical experience in programming for the Cray, YMP, in incorporating existing scientific software packages into user-written programs, in submitting remote jobs to the Pittsburgh Supercomputer Center, and in producing animated graphical output to summarize the typically large volume of output data generated by large scientific programs. (Also offered as MA451, may not be taken for duplicate credit.)

CO 460 Theory of Computation 3c-0l-3sh
Prerequisites: CO310 or consent of instructor
Formal methods for describing and analyzing programming languages and algorithms. Backus-Naur forms; productions; regular expressions; introduction to automata theory, Turing machines; recent concepts in algorithm theory computability.

CO 480 Seminar on Technical Topics 0c-1l-1sh
Prerequisites: See text below
Reading, review, and discussion of the current literature of computer science and industry professional and technical journals, oral presentations. Should be taken the last semester of the senior year. Should not be taken at the same time as CO380

CO 481 Special Topics in Computer Science 3c-0l-3sh
Prerequisite: 12 semester hours in Computer Science or consent of instructor
Seminar in advanced topics of Computer Science, content will vary depending on interests of instructor and students. May be repeated for additional credit.

CO 485 Independent Study var-1-4sh
Prerequisite: Permission of a Computer Science faculty member who agrees to supervise the student's project. Arrangements for selection of a specific topic must be made

CO 493 Internship in Computer Science var-12sh
Prerequisites: CO250, CO300, CO310, CO315, CO380, other courses depending on type of internship position desired, completion of application, and selection by committee
Positions with participating companies provide students with experience in computer science under the supervision of the companies and faculty. Requirements include three on-site consultations, two university consultations, completion of progress reports, oral presentation, and a final cumulative paper. Offered only to students during the second semester and summer of the junior year or the summer and the first semester of the senior year. No more than four semester hours of CO493 may be applied toward the 30-semester-hour requirement for a major in Computer Science.

CR: Criminology
Department of Criminology
College of Humanities and Social Sciences

CR 101 Crime and Justice Systems 3c-0l-3sh
This course introduces the field of criminology through the examination of historical data, statistical information, theories of criminal causation, social control of behavior, development of laws, evaluation of criminal justice system policies, procedures, and trends. Students will learn the terminology of the field, gain an awareness of the methods of inquiry utilized in the field, and have the opportunity to examine personal attitudes and values regarding crime and responses to crime

CR 102 Survey of Criminology 3c-0l-3sh
The purpose of this course is to provide an understanding of the discipline of criminology through an examination of its theories, basic assumptions, and definitions. Not for credit after prior CR102, Criminology.

CR 210 Criminal Law 3c-0l-3sh
A study of the history and sources of criminal law coupled with an analysis of the substantive elements of specific crimes. Not for credit after prior CR301: Criminal Law I.

CR 260 Criminal Procedure and Admissibility of Evidence 3c-0l-3sh
Law of arrest, search, and seizure, with discussion of important case law. Analysis of safeguards established for protection of individual liberties. Not for credit after prior CR302, Criminal Law II.

CR 270 Juvenile Justice System 3c-0l-3sh
A study of the agencies and processes dealing with juvenile justice in the United States.

CR 283 Police Patrol Administration 3c-0l-3sh
The study of the role and characteristics of the police patrol function. Special emphasis is given to understanding how patrol relates to other police functions and its effect on crime.

CR 291 Theory and Techniques of Interviewing 3c-0l-3sh
Consideration of the theory, nature, methods, and principles of interviewing. Not for credit after prior CR350: Techniques of Interviewing.

CR 295 Criminal Investigation 3c-0l-3sh
The study of logical and scientific principles necessary for the detection and investigation analysis of criminal activities. Theories of information, interrogation, observation and interrogation, and observation and ethics are among the topics to be discussed. Not for credit after prior credit CR310 Criminal Investigation.

CR 300 Theory of Complex Criminal Justice Organizations 3c-0l-3sh
Prerequisite: CR102 or permission of instructor
Study of the evolution and theories of organizational alternatives and their application to the administration of justice.

CR 306 Criminological Research Methods 3c-0l-3sh
Prerequisite: CR102 or permission of instructor
An introduction to the basic criminological research methods designed to prepare the student to understand and participate in quantitative and qualitative research.

CR 355 Crime in the Workplace 3c-0l-3sh
Study of the theoretical and legal basis of crime in the workplace.

CR 357 Law, Social Control, and Society 3c-0l-3sh
The evolution and development of the modern legal system. Topics include civil, criminal, and administration law, the legal profession, legal systems in American society, and the law as one of many instruments of social control and social change.

CR 361 Juvenile Law 3c-0l-3sh
An analysis of pertinent juvenile law and procedure involving case study methods.

CR 362 Correctional Law 3c-0l-3sh
Study and theory of principles of law relating to rights of the convicted, postcorrection procedures, and correctional management.

CR 370 Correctional Institutions 3c-0l-3sh
An examination of the organization and function of correctional institutions. Emphasis is placed on various social processes and problems associated with incarceration. Not for credit after prior credit CR440: Institutional Treatment of Offenders.

CR 371 Community-Based Corrections 3c-0l-3sh
A survey of noninstitutional programs, focusing on alternatives to incarceration in community settings. Programs reviewed include prerelease, probation, parole, halfway houses, and restitution-based programs. Not for credit after prior CR445: Noninstitutional Treatment of the Offender.

CR 383 Police Administration 3c-0l-3sh
A study of police management, structure, and operations and their roles in the quality of services delivered. The relationship between police administration and its social environment will be examined. Not for credit after prior CR201: Police Administration.

CR 386 Correctional Administration 3c-0l-3sh
A study of correctional management, structures, and operations and their roles in the quality of services delivered. The relationship between correctional administration and its social environment. Not for credit after prior CR492 Correctional Administration.

CR 388 Court Administration 3c-0l-3sh
A study of court responsibility within the criminal and civil justice systems, jurisdictions, policies, and management procedures in court administration.

CR 390 Women and Crime 3c-0l-3sh
A study of the nature and extent of women's crime, theories of female criminality, processing of women offenders through the criminal justice system, the response of police and court officials to women as victims of crime, and opportunities for women as employees in criminal justice agencies.

CR 391 Substance Use and Abuse in Criminal Justice 3c-0l-3sh
Study of substance use and abuse confronting American society. Alcohol and drug use and abuse education, philosophy, physiological effects, and social aspects will be examined in terms of control measures and public safety.

CR 397 Instrumental Detection of Deception 3c-0l-3sh
An exploration of instrumental detection of deception, devices for measuring emotional responses to verbal stimuli, psychological aspects of deception, analysis of detection techniques applicable to the criminal justice system, and personnel selection and retention. Not for credit after prior CR325, Instrumental Detection of Deception.

CR 400 Theoretical Criminology 3c-0l-3sh
Prerequisites: CR102, 300, or permission of instructor
A review and critical analysis of the major criminological theories beginning with the Classical School; psychological, sociological, economic, biological, and political theories of crime and its causes will be included.

CR 401 Contemporary Issues in Criminology 3c-0l-3sh
Prerequisite: Seniors only or permission of instructor
Examination of the nature and extent of crime in modern Western society. Emphasis will be placed on issues selected from, but not limited to, emerging patterns of violence, organized crime, white collar crime, victimless crime, corruption, and those crime control strategies deemed appropriate in a democracy. Not for credit after prior CR490: Crime in Modern Society.

CR 416 Criminal Justice Personnel and Supervision 3c-0l-3sh
Prerequisites: CR102, 300, or permission of instructor
Study of public personnel systems with specific application to criminal justice agencies. The role and function of supervision as a concept of a comprehensive personnel system as well as the relationship between agency personnel and the impact on crime will be examined.

CR 451 Etiology of Delinquent Behavior 3c-0l-3sh
Prerequisites: CR102, 300, or permission of instructor
An analysis of the prevalent theories of delinquency causation with a view toward developing prevention, control, and treatment approaches. Not for credit after prior CR431: Etiology of Delinquent Behavior.

CR 456 Supervised Research 3c-0l-3sh
Prerequisite: CR306
Directed intensive individual research focusing on a particular issue in criminology or an applied problem in the administration of justice. The research project must be approved by the instructor.

CR 470 Comparative Study of Justice 3c-0l-3sh
Prerequisites: CR102, 300, or permission of instructor
Comparison of American systems of administration of justice with those of other nations. Not for credit after prior CR430: Comparative Study of Justice.

CR 480 Seminar in Criminology—The Administration of Justice 3c-0l-3sh
A study of selected topics in criminology—the administration of justice. May

be taken more than once for a maximum of 6 semester hours. Not for credit after prior CR480, Seminar in the Administration of Justice.

CR 481 Special Topics in Criminology var-1-3sh
Prerequisite: Department consent
A seminar providing study of selected topics not emphasized in other courses. May be taken more than once to a maximum 6 semester hours.

CR 482 Independent Study in Criminology var-1-3sh
An opportunity for a student with advanced standing to explore special interests. May be taken more than once to a maximum of 6 semester hours with the approval of instructor. Not for credit after prior CR482: Independent Study

CR 491 Individual and Group Treatment Modalities 3c-0l-3sh
Prerequisites: CR102, 300, or permission of instructor
A study of the therapeutic techniques, process, and application used in various criminal justice environments.

CR 493 Internship var-3-12sh
A structured field placement designed to broaden the student's educational experience through observation and participation in work assignments in government or private sectors. Six semester hours of credit can be applied to the major requirements.

CS: Consumer Services
Department of Human Development and Environmental Studies
College of Health and Human Services

CS 101 Personal and Family Management 3c-0l-3sh
Management as a system and its relationship to individuals and families. Formulation of goals, values, and standards; use of decision-making process, utilization of resources.

CS 112 Fundamentals of Clothing Construction 1c-3l-3sh
Principles and techniques involved in fundamental clothing construction and fitting are analyzed. Directed laboratory experiences provide an opportunity to solve individual problems in garment structure through the application of principles.

CS 121 Introduction to Consumer Services 1c-0l-1sh
Career possibilities for Consumer Services majors are explored. Students will be guided in clarifying their professional objectives and understanding the necessary preparation to pursue individual vocational goals.

CS 205 Color Theory and Application 3c-0l-3sh
The theoretical basis of color is presented as it relates to the human visual system, light, pigment, perception, and measurement. The application of color theory is discussed in terms of interior design, merchandising, and display.

CS 212 Advanced Clothing Construction 1c-3l-3sh
Prerequisite: CS112 or placement (by exam)
Principles of advanced fitting and clothing construction are applied and analyzed. Offered even years, fall semester.

CS 213 Residential Appliances and Consumer Electronics 2c-2l-3sh
Consumer education in the selection, use, and care of home equipment appliances and consumer electronics; the relationship of energy sources and utilities to major appliances, portable and personal care appliances, and consumer electronics.

CS 214 Environmental Textiles 2c-2l-3sh
Investigation of components and characteristics of textiles for man's near environment with emphasis on soft goods for public and private interiors, including production, marketing, and legislation affecting acquisition, use, and care. A student may not count both CS214 and 314 toward graduation requirements.

CS 216 Clothing and Culture 3c-0l-3sh
Prerequisite: PC101
Survey of aesthetic, cultural, sociopsychological, economic, and physical factors related to the meaning and use of clothing for the individual and society.

CS 217 Interior Design 1c-3l-3sh
Prerequisite: AR120 or equivalent
Emphasis upon development of knowledgeable consumers in the selection and design of a home, its furnishing, and its total environment.

CS 299 Cooperative Education I 0sh
Prerequisite: Approval of Co-op Coordinator
Designed to combine theory with practical application through job-related experiences. Consumer services majors are actively employed in business, industry, and a variety of organizations and agencies with a work focus which relates to their academic training and career objectives. First of two alternating work experiences required.

CS 303 Visual Merchandising 1c-3l-3sh
Prerequisite: AR120 or equivalent
Designing and arranging of display and selling areas in relationship to merchandising trends and consumer demands. Emphasis on promotion techniques and merchandise sales through effective use of space, design, and color.

CS 312 Housing and Culture 3c-0l-3sh
Managerial, sociological, economic, and aesthetic aspects of housing and man are investigated as well as a consideration of the environment of the home as part of the community.

CS 314 Textiles 2c-2l-3sh
Prerequisite: CH102
Analyses of textile components of fiber, yarn, fabrication, finishes, and color with emphasis upon consumer acquisition, use, and satisfaction.

CS 315 Consumer Economics and Family Finance 3c-0l-3sh
Economic, sociological, and psychological principles are applied to family money management problems. Information needed to manage finances effectively and to become a rational consumer is presented.

CS 318 Fashion Merchandising 3c-0l-3sh
Prerequisites: CS216 and upper level standing
Study of the origins, movement, dissemination, and prediction of fashion; an investigation of the methods of operation, merchandising activities, and current fashion industry trends; an analysis of the planning and control procedures used in retail merchandising of fashion goods.

CS 350 Apparel Industry I 3c-0l-3sh
Prerequisites: CS216, completion of 57 semester hours
Introduces the student to the design, production, and distribution of apparel, including primary textile markets, women's, men's, and children's wear, accessories, fashion centers, retailers of fashion, apparel wholesale selling process, fashion store image, and future trends.

CS 354 Independent Study var-1-3sh
Prerequisite: Permission
Particular consumer considerations are independently investigated in the area of housing, home equipment, interior design, clothing, and textiles, or in the management of resources. Course may be repeated for a total of 3 semester hours. Students meet with a faculty member at least 5 hours per semester hour.

CS 357 Interior Design Studio 1c-3l-3sh
Prerequisite: CS217
Creative solutions to problems in interior environments emphasized. Professional interior design practices; design opportunities.

CS 399 Cooperative Education II 0sh
Prerequisite: Approval of co-op coordinator
A program designed to combine theory with practical application through job-related experiences. Consumer services majors are actively employed in business, industry, and a variety of organizations and agencies with a work focus which relates to their academic training and career objectives. The student is required to serve a minimum of two alternating work experiences.

CS 413 Problems in Consumer Economics 3c-0l-3sh
Prerequisite: CS315 or Economics
Problems of consumer-seller relationships studied with emphasis given to effects of current economic and social forces. Governmental and private protection agencies which aid the consumer are reviewed. Individual investigations required. Fall semester only.

CS 416 Problems in Family Finance 3c-0l-3sh
Prerequisite: CS315
In-depth theories and principles in personal and family finance and the rights and responsibilities of consumers are emphasized. Opportunities are provided for students to explore specific areas of interest. Spring semester only.

CS 421 Senior Seminar 2c-0l-2sh
Prerequisites: CS121, completion of 90 semester hours
Knowledge gained in major and outside concentration courses is applied to individual career goals. Students have the opportunity to pursue related areas not directly covered in previous coursework, with emphasis upon independent research, analytical thinking, and communications skills.

CS 433 Study Tour var-1-6sh
Prerequisite: Upper-level standing
Opportunity is provided to visit business establishments and cultural centers concerned with household equipment, furnishings, textiles, clothing, and housing in America as well as abroad. Museums, factories, designers' showrooms, distribution centers, stores, cultural events, and seminars are included. Course may be repeated for a total of 6 semester hours.

CS 434 Quality Control in Textiles 2c-2l-3sh
Prerequisite: CS314
Physical properties explored through microscopic examination and use of textile testing equipment for fabric analysis. Offered intermittently.

CS 450 Apparel Industry II 3c-0l-3sh
Prerequisites: CO350 and Liberal Studies math requirements
Introduces the student to the merchandising and promotion of apparel, including organization, buying responsibilities, techniques, and resources; various retail institutions, resident buying offices, apparel dollar planning and control, apparel merchandise assortment planning, apparel buying practices, application of apparel planning and buying, and apparel advertising and promotion.

CS 453 Flat Pattern Design 1c-3l-3sh
Prerequisite: CS112 or CS212
Garment design achieved by use of flat pattern techniques. An understanding is developed of the interrelationship of garment design, figure analysis, fabric, fit, and construction processes. Offered even years, spring semester.

CS 454 Tailoring 1c-3l-3sh
Prerequisite: CS112 or CS212
Various tailoring methods are studied and applied in the selection, fitting, and construction of a tailored garment. Consumer problems in the selection of ready-to-wear apparel are investigated. Offered odd years, fall semester.

CS 455 Draping 1c-3l-3sh
Prerequisite: CS112 or CS212
Apparel design principles are applied by draping fabric to conform to the human figure. Students will pad a form to individual measurements and create garments that are both individual and original. Offered odd years, spring semester.

CS 456 Historic Costume 3c-0l-3sh
Chronological study of historic costume from ancient times to the present day with emphasis on the effect of aesthetic, economic, geographic, political, religious, and social factors upon the design of clothing worn.

CS 461 Microwave Cooking Technology 2c-2l-3sh
Study of the electronic technology, selection, care, and use of the microwave oven. Basic physical and chemical concepts related to microwave cooking are included. Individual investigative research problems are required.

CS 462 Historic Interiors 3c-0l-3sh
Chronological study from ancient times to the mid-19th century of the dominant influences and characteristics of historical interiors, furniture, and ornamental design. Emphasis placed upon style detail and its relationship to social, economic, political, religious, and aesthetic influence and to the contemporary scene. Paper required.

CS 463 Modern Interiors 3c-0l-3sh
Chronological study from mid-19th century to the present of the dominant influences and characteristics of the 20th-century interior, furniture, and ornamental design. Emphasis placed upon style detail and its relationship to social, economic, political, religious, and aesthetic influences and to contemporary usage. Paper required.

CS 464 Interior Planning and Drawing 1c-3l-3sh
Prerequisite: CS217
Analysis and design contract interior spaces. Presentation, appropriate media, equipment, and techniques will be stressed. Freehand and mechanical methods employed to depict floor plans, elevation, and construction details with emphasis on function.

CS 465 Interior Lighting 3c-0l-3sh
Prerequisite: CS217 or equivalent
Lighting fundamentals applicable to the environmental design of residential and commercial spaces. Includes calculation methods, terminology, theory of color visibility, light source alternatives, fixture function and selection, lighting trends, and related professional organizations.

CS 493 Internship var-1-12sh
Prerequisites: Approval of instructor and department chairperson; upper-level standing
Practical experience related to the student's major area of study with objectives, supervised experience, and evaluation. Course may be repeated for a total of 12 semester hours.

DE: Distributive Education
Department of Office Systems and Business Education
College of Business

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

DE 331 Modern Merchandising 3c-0l-3sh
Techniques for planning and controlling inventory, analyzing sales, working with modern systems for handling cash, and using color, line, and design. Practice in preparing merchandise display units.

DE 332 Retail Management 3c-0l-3sh
Prerequisite: DE331 or DE333
Study of structure and changing environment of retailing; special emphasis on merchandise management, organization, sales promotions, services, and control.

DE 333 Principles of Selling 3c-0l-3sh
Covers field of selling, preparing to sell, the selling process, and an introduction to sales management. Sales demonstrations incorporating audiovisual aids are a part of the course.

DE 413 Methods and Evaluation in Distributive Education II 3c-0l-3sh
Prerequisites: DE410 or BE111, MK320, DE333, and EP302
Includes two sections of special methods and evaluation in this field. Objectives are to acquaint students with the basic principles of group and individual instruction in various subject matter areas, as well as methods of presentation. Unit plans, lesson plans, demonstrations, and evaluations will be prepared. Students select sections needed for certification.

EC: Economics
Department of Economics
College of Humanities and Social Sciences

EC 101 Basic Economics 3c-0l-3sh
Scarcity, role of prices in determining production and the allocation of resources, business cycle analysis, policy options for reducing unemployment and inflation, economic role of government, the farm problem, poverty, and international trade are studied. For those who do not plan to take more than 3 semester hours of economics. Note: May not be taken after successful completion of or concurrent registration in any other Economics course.

EC 121 Principles of Economics I 3c-0l-3sh
Nature and methodology of economics; mixed capitalism and market economy; national income; employment theory, including economics of fiscal policy; money, banking, and Federal Reserve System; international trade and finance.

EC 122 Principles of Economics II 3c-0l-3sh
Economics of the firm; theory of consumer demand, determination of price and output in different market structures; distribution of income; economic growth

EC 241 Contemporary Economic Issues 3c-0l-3sh
Prerequisites: EC101 or EC122
A rigorous but nontechnical analysis of a variety of economic problems and a formulation and evaluation of possible corrective policies

EC 283 Environmental Economics 3c-0l-3sh
Prerequisites: EC101 or EC122
Examination of economic costs and benefits of environmental control and modification. Techniques of economic analysis are used to understand economic aspects of environmental problems and contribute toward their solution.

EC 325 Monetary Economics I 3c-0l-3sh
Prerequisites: EC121, EC122
Organization, operation, and economic significance of U.S. monetary institutions; commercial banks and Federal Reserve System; survey of monetary theory and policy; mechanism of international payments.

EC 326 Monetary Economics II 3c-0l-3sh
Prerequisite: EC325 or permission of the instructor
Detailed study of monetary theory, tasks of central banking, principal objectives of monetary policy; intensive study of recent monetary experience; complementary and competing aims of monetary and fiscal policy

EC 330 Labor Economics 3c-0l-3sh
Prerequisites: EC121, EC122
History, structure, and operation of trade unions and employer organizations, major federal labor legislation, collective bargaining theory; wage determination; current labor problems

EC 331 Economic Organization of Industry 3c-0l-3sh
Prerequisite: EC122 or permission of the instructor
Social effectiveness of industries analyzed through measures of market structure, market conduct, and market performance

EC 332 Government and Business 3c-0l-3sh
Prerequisite: EC122 or permission of the instructor
An analysis of the antitrust laws focusing on the maintenance of competition, the prohibition of unfair business conduct, and the achievement of desirable economic performance.

EC 333 Regulation of Industry 3c-0l-3sh
Prerequisites: EC121, EC122 or permission of the instructor
Examines the theory and practice of regulation, emphasizing effects of regulation on economic performance and efficiency in the U.S.

EC 334 Economics of Corporate Decisions 3c-0l-3sh
Prerequisites: EC121, EC122, MA121 or equivalent
Applications of economic theory using algebra, elementary statistics, and calculus to solve business optimization problems including problems of forecasting and risk.

EC 335 Public Finance 3c-0l-3sh
Prerequisites: EC121, EC122 or permission of the instructor
Taxation and expenditure theory at the federal level; federal budget and debt considerations; public sector impact upon economy

EC 336 State and Local Finance 3c-0l-3sh
Prerequisite: EC122 or permission of the instructor
Analysis of character and impact of state and local government revenue sources, expenditures, and fiscal systems; intergovernmental fiscal relations.

EC 339 Economic Development I 3c-0l-3sh
Prerequisites: EC121, EC122
Theory of growth; theory of economic development of underdeveloped countries.

EC 340 Economic Development II 3c-0l-3sh
Prerequisites: EC121, EC339
Application of the theory of growth and analysis of economic development of selected economies, empirical and econometric studies of underdeveloped countries and their economic institutions.

EC 343 History of the Economic Development of the United States 3c-0l-3sh
Prerequisites: EC101 or EC121 or EC122
Applications of economic theory and models of economic development to the main patterns of U.S. postrevolutionary growth; emphasizes economic development as a laboratory for economic analysis.

EC 345 International Economics I 3c-0l-3sh
Prerequisites: EC121 and EC122 or permission of the instructor
Theory of international trade, analysis of balance of payments; international economic equilibrium, mechanism of international economic and monetary adjustments

EC 346 International Economics II 3c-0l-3sh
Prerequisite: EC345 or permission of the instructor
Application of theory of international trade to empirical data and problems; historical survey and examination of current problems of international trade; the institutional setting of international trade

EC 350 Comparative Economic Systems 3c-0l-3sh
Prerequisites: EC101 or EC121 or EC122
Evaluation of premises, practices, institutions, and performance of capitalist, socialist, and mixed economies using economic theory and measurement.

EC 351 Russian Economic Development 3c-0l-3sh
Prerequisites: EC101 or EC121 or EC122
Study of the theory, institutions, and performance of the Russian economy including comparison of present and past patterns of economic development.

EC 355 Statistics for Economists 3c-0l-3sh
Introduction to economic statistics. Material covered regarding empirical frequency distributions, probability, distributions of random variables, functions of random variables, and tests of economic hypotheses.

EC 356 Introduction to Econometrics 3c-0l-3sh
Prerequisites: EC355 or its mathematical equivalent or permission of the instructor
Introduction to econometrics. Interest centers upon linear normal regression models of two or more random variables, special econometric problems, and solutions of simultaneous equations

EC 371 Economics of Labor Legislation 3c-0l-3sh
Prerequisite: EC330 or permission of the instructor
Economic background and effects of governmental regulation of labor relations, with emphasis on a detailed examination of National Labor Relations Act as amended

EC 372 Economics of Wages and Employment 3c-0l-3sh
Prerequisite: EC330 or permission of the instructor
Analysis of wages and employment under various market structures. Also, analysis of the impact of labor market forces on wages, prices, and distributive shares.

EC 373 Economics of Human Resources 3c-0l-3sh
Prerequisite: EC101 or EC122
Inquiry into economic demographics and related factors affecting growth, structure, and distribution of an economy's labor force into different occupations.

EC 382 Urban Economics 3c-0l-3sh
Prerequisite: Three semester hours in Economics or permission of the instructor
Structure of urban economy, goals, processes, problems, and policy in urban economic development

EC 383 Regional Economics 3c-0l-3sh
Prerequisites: EC121 and EC122
Process of regional economic growth, location theory, basic techniques of regional analysis, public and private area development programs, and urban problems.

EC 421 Macroeconomic Analysis 3c-0l-3sh
Prerequisites: EC121, EC122 or permission of the instructor

Emphasizes aggregate income levels and problems of unemployment, inflation, and growth. Covers consumption and investment theories and the role of fiscal and monetary policy.

EC 422 Microeconomic Analysis 3c-0l-3sh
Prerequisites: EC121, EC122, MA121 or equivalent
Consumer behavior, theory of the firm, theory of exchange, market structures, distribution, general equilibrium theory, welfare economics.

EC 480 Seminar 3c-0l-3sh
Prerequisite: Permission of the instructor
Seminar in selected economic issues or problems

EC 481 Special Topics 3c-0l-3sh
Prerequisite: Permission of the instructor

EC 482 Independent Study var-1-6sh
Prerequisite: Permission of the department and the instructor

EC 493 Internship in Economics var-2-12sh
Prerequisite: A student must be an Economics major who has completed at least 12 semester hours in economics and who has at least a 2.5 grade-point average in the major and in all coursework
The course provides on-the-job experience in economics positions with private and governmental employers. The student is also required to complete related academic work in the form of papers and selected readings. Number of credits earned will depend upon the nature of the job and amount of time involved in internship. A maximum of six of the credits earned in this course may be counted toward the 30 semester hours in economics requirement for Economics majors

ED: Education
College of Education

ED 150 Educational Planning 1c-0l-1sh
Introduces students to the system of higher education and to skills that promote effective educational planning and decision making. Includes the topics of history and purposes of higher education and its changing curriculums; models for, and variables to consider in, decision making, goal setting, and educational planning. Note: Certain sections of this course will be restricted to specific enrollment groups.

ED 160 Learning Strategies 1c-0l-1sh
Assists students to develop and use effective and efficient study strategies on a consistent basis. Students will examine their academic goals and implement study strategies to help achieve those goals. Includes the topics of goal setting and self-monitoring, learning styles, test preparation and test taking, lecture and textbook note taking, time management and concentration, and general strategies for learning. Students will be required to give evidence of application of the study strategies to other courses in which they are currently enrolled. Active participation in class meetings is expected. Note: Certain sections of this course will be restricted to specific enrollment groups.

ED 170 Career Exploration 1c-0l-1sh
Introduces students to the theoretical and practical framework with which to explore careers compatible with overall academic skills, aptitudes, and life goals. Students will examine the world of work, assess their interests and abilities, and make realistic decision on academic majors and careers. Note: Certain sections of this course will be restricted to specific enrollment groups.

ED 242 Pre-student Teaching Clinical Experience I var-1sh
Observation/participation in a basic education classroom beginning not later than the sophomore year.

ED 321 Student Teaching var-6sh
Prerequisite: Admission to teacher certification
Experience in teaching at the elementary level; coordination and visitation by a university faculty member with daily supervision by a cooperating classroom teacher.

ED 342 Pre-student Teaching Clinical Experience II var-1sh
Prerequisites: ED242 and admission to teacher certification
Students work toward the development of specific competencies that relate to individual major fields of teaching.

ED 408 Reading in the Content Areas 3c-0l-3sh
Prerequisite: EL222
Problems related to teaching students reading and study skills specifically needed in each of the subject areas at the elementary level. Content teachers learn how to develop students' competence in these skills as part of their regular classroom instruction.

ED 415 Computers in the School Curriculum 3c-0l-3sh
Prerequisite: CO101, BE101, IM101, or permission of the instructor
Students will use a variety of computer software including word processing, record management programs, and simulation programs. Emphasis will be on the application of computer programs within the K-12 school curriculum.

ED 421 Student Teaching var-6sh
Experience in teaching at the elementary level; coordination and visitation by a university faculty member with daily supervision by a cooperating classroom teacher.

ED 423 Professional Practicum, Including School Law var-3sh
Series of conferences and related activities to prepare students for actual teaching experiences. Parallels student teaching experience in junior and senior years. (Elementary education majors only)

ED 431 Teaching in Home Economics var-6sh
Experience in teaching home economics at the secondary level.

ED 441 Student Teaching var-6-12sh
Experience in teaching at the elementary or secondary level, coordination and visitation by a university faculty member with daily supervision by a cooperating classroom teacher.

ED 442 School Law 1c-0l-1sh
Required of all teacher certification students. Includes overview of legal principles that apply to special areas of education. Must be taken prior to student teaching.

ED 451 Teaching Science in the Secondary School 2c-2l-3sh
Background to help science majors meet the problems of teaching science. Various inquiry approaches useful in meeting objectives of a contemporary science class are taught and exemplified

ED 452 Teaching of English and Communication in the Secondary School 3c-0l-3sh
Prerequisites: EN 314, 323, and 380
This course is a prerequisite to student teaching in English. Introduces the student to current professional practices in the teaching of English and communications in high school.

ED 453 Teaching of Foreign Languages in the Elementary/Secondary Schools 3c-0l-3sh
Prerequisites: Successful completion of 321-322 and 351-352 in the student's major language; passage of a language proficiency examination or permission of the instructor
The student will study current theories of language acquisition and methods of language teaching for the elementary and secondary school. Through hands-on practice and peer teaching demonstrations, the student will develop techniques for teaching functional language, planning lessons, setting curricular objectives, testing language skills, and selecting/adapting materials for both elementary and secondary school classrooms. (Course taught fall semester only)

ED 455 Teaching of Social Science in Secondary Schools 3c-0l-3sh
Study of modern methods and techniques for teaching social science and of current curriculums in social science.

ED 456 Teaching Math in the Secondary Schools 3c-0l-3sh
Study of modern methods and techniques for teaching mathematics and current curriculums.

ED 462 Issues and Innovations in Education 3c-0l-3sh
Study of issues and innovations which influenced education will be included in this course. Educational innovations and issues which deal with curriculum, school organization, and materials of instruction will be examined.

ED 481 Special Topics 3c-0l-3sh
Prerequisite: By permission only

Provides an opportunity for students to investigate in depth an area of education under professional supervision.

ED 495 International Study Tour in Education var-3sh
Study of various peoples through their cultural settings and educational systems; on-site visitation to selected schools and other social agencies and institutions; seminars with school officials and directed readings.

ED 496 Independent Study var-3sh
Prerequisite: Approval of instructor and department
Advanced work in an area of the departmental curriculum.

ED 499 Multicultural/Multiethnic Education 2c-0l-2sh
Prerequisite: One methods course must be taken prior to, or concurrently with, ED 499
Provides students with an understanding and appreciation of cultural diversity in the United States. Students will gain the ability to locate and develop curricular materials appropriate to this country's diversity.

EE: Early Childhood Education
Professional Studies in Education
College of Education

EE 200 Introduction to Early Childhood Education 3c-0l-3sh
Introductory course for prospective teachers of young children. Provides students with the opportunity to gain knowledge of historical, sociological, and political aspects of early childhood education. Emphasis on systematically observing, recording, and evaluating children's behavior in classrooms. (Formerly EL353 Preschool Education)

EE 220 Language Development and Children's Literature 3c-0l-3sh
Includes the study of children's language acquisition and children's literature within the context of a developmentally appropriate language arts curriculum, preschool through the primary grades. Strategies for developing children's linguistic competence and integrating literature throughout the early childhood program will be emphasized. Observations, interviews, and teaching experiences are an integral part of the course.

EE 310 Integrated Curriculum I 3c-0l-3sh
Examines the sequence of cognitive development in children and the implications for instructional programs. Stages of cognitive understanding will be applied to the basic components of numerical concepts and science concepts. Classroom management strategies that can be utilized in varied environments will be stressed.

EE 311 Integrated Curriculum II 3c-0l-3sh
Enables students to realize the importance and relevance of content area subjects as related to the early childhood years. Planning for teaching with specific emphasis on methods and materials for social and environmental living is introduced. Integration of music and art areas is emphasized. Values systems and self-esteem are integral to social living.

EE 312 Aesthetic Experiences for Young Children 3c-0l-3sh
An interdisciplinary approach to different forms of creative expression in young children. Art, music, and movement will be analyzed as aesthetic elements in a comprehensive early childhood curriculum. Development of creative potential in both teachers and children will be promoted as a means of enhancing the artist's experiences. Students will expand their use of the arts to enhance the self-esteem and self-worth of the children as specialized knowledge and skills are applied in directed teaching activities with small groups.

EE 315 Development and Learning through Play 3c-0l-3sh
Provides early childhood educators with the knowledge and skills necessary to promote and guide children's play behavior as the child's basic learning mechanism. Emphasis on definitions, theories, and stages of play within the context of social, emotional, physical, and intellectual growth for children aged 0-8 years. Students will observe children at play, design specific learning activities that utilize a play/games format, and direct educational experiences during the supervised field component. (Previous title: Play as Cognitive and Affective Development)

EE 451 Teaching Primary Reading 3c-0l-3sh
A methods course designed to assist students in developing the reading abilities of young children. Deals with instructional issues related to teaching reading and introduces students to varying reading and pre-reading processes which are effective with young children. Also emphasizes diagnostic and assessment strategies for teaching reading.

EE 481 Special Topics var-3sh
Prerequisite: Approval of instructor and department
A course/seminar on topics in education appropriate for the Early Childhood Education setting.

EH: Education of the Hearing Impaired
Department of Special Education and Clinical Services
College of Education

EH 114 Introduction to Hearing Impaired 3c-0l-3sh
Prerequisites: Adviser permission, EH majors only
Deals with the different approaches used in teaching the hearing impaired—manual language, oral language, and total communication. The historical background of each approach is presented with its strengths and weaknesses. Criteria for the use of each approach established in consideration of degree of loss exhibited by the pupil, the age of onset, and the social and psychological implications.

EH 115 Introduction to Sign Language 1c-0l-1sh
Development of manual dexterity and fluency using fingerspelling. Acquisition of basic sign language vocabulary. Practice in acquiring general information from a signed message and conversing informally on commonly used topics.

EH 244 Intermediate Sign Language 1c-0l-1sh
Prerequisite: EH115
Emphasis on comprehension of signed information and on developing fluency in conveying a message in both signed English and American Sign Language. Modification of signs and individualization of techniques for instruction/communication with learning-impaired or multihandicapped deaf learners.

EH 307 Speech for the Hearing Impaired 3c-0l-3sh
Prerequisites: EH114, SH242
Techniques for developing, diagnosing, analyzing, and correcting the speech and voice problems of hearing-impaired individuals. Lecture, demonstration, and special projects.

EH 308 Language for the Hearing Impaired 3c-0l-3sh
Prerequisites: EH114, SH234
Development and remediation of language of the hearing impaired. Language sampling and diagnostics, sentence patterning, and analytic vs. natural teaching methods. Structuring a communicative environment.

EH 330 Hearing Practicum var-2sh
Prerequisites: EH360, EH115, EH244
Provides students with actual contact with hearing-impaired individuals. Practica will be set up in appropriate school programs and/or clinics for the hearing impaired, or hearing itinerant programs, or in clinical settings where hearing-impaired individuals are receiving therapy or are being tested. Techniques of observing and evaluating behavior are presented initially to prepare the student to profit maximally from the observation experiences. Written reports of the practica are submitted and discussed, and each student is encouraged to gain experience in as many different settings as available.

EH 331 Advanced Sign Language 1c-0l-1sh
Prerequisites: EH115, EH244
Studies the evolution of signs, dialectical sign systems. Analysis and comparison of the linguistic similarities/differences of various sign languages. Direct translation of written or spoken information on specific topics using American Sign Language or Signed English. Practice using conversation on both a social and academic level.

EH 360 General Methodology for Education of Hearing Impaired 3c-0l-3sh
Prerequisites: EH114, EH307, EH308
Provides a systematic coverage of the basic procedures for teaching curriculum subjects. Included are adaptive methods of instruction for teaching

mathematics; science as it relates to the child and the curriculum; content, objectives, and resource materials for social studies; creative experiences in the field of language arts, rhythmics, and physical education and health

EH 365 Parent Preschool Programs for the Hearing Impaired 3c-0l-3sh
Prerequisites: EH114, EX220, SH234, EH308, EH307
Developing home/clinic programs for parents and hearing-impaired infants (0-3 years). Teaching speech, language, speechreading, use of residual hearing, and developing readiness skills at preschool level.

EL: Elementary Education
Professional Studies in Education
College of Education

EL 211 Music for the Elementary Grades 2c-0l-2sh
Geared for elementary education students. Includes basic ideas for understanding, development, and confidence for future classroom teachers and their pupils in areas of music education

EL 213 Art for the Elementary Grades 2c-0l-2sh
The creative use of art materials and an understanding of development of capacities of children through art.

EL 215 Child Development 3c-0l-3sh
Survey of human development, from conception to adolescence, in terms of basic scientific data. Development, growth, and behavior are studied and their implications for home, school, and community are considered.

EL 221 Children's Literature 3c-0l-3sh
Acquisition of a wide acquaintance with children's literature, old and new. Poetry selections, annotated stories, and bibliographies will be assembled. Ways and means to develop, stimulate, and guide children's reading of literature presented. Principles and techniques of successful storytelling are studied and practiced.

EL 222 Teaching of Reading I 3c-0l-3sh
Systematic coverage of the teaching of reading, including methods, techniques, and materials. First of a two-course sequence.

EL 312 Teaching of Elementary Science 3c-0l-2sh
Emphasis placed upon science as it relates to child and curriculum, planning for teaching science, and recent innovations in science teaching. Course offered on the block only

EL 313 Teaching Mathematics in the Elementary School 3c-0l-3sh
Prerequisites: MA151, 152
Recent developments in curriculum and methods of instruction of contemporary elementary school mathematics programs. Students will become acquainted with books, materials, and other resources helpful to prospective teachers. Includes observations of master teachers.

EL 314 Teaching of Health and Physical Education 2c-0l-2sh
Games, stunts, rhythms, relays, tumbling, dances, and skills suitable for the elementary school child. Teaching of health in elementary school is emphasized, including methods, materials, and lesson planning.

EL 351 Creative Activities in the Elementary School 3c-0l-3sh
Provides students with a wide range of creative experiences in fields of art, crafts, music, rhythmics, dramatics, and games in elementary school. Stress is placed upon need to help children in developing their capacities for creative expression in these areas.

EL 353 Preschool Education 3c-0l-3sh
Principles and practices of guiding the learning experiences of kindergarten students. Special attention is given to observations, kindergarten program and its curriculum, and material and methods of instruction.

EL 356 Pedagogy I 3c-0l-3sh
Prerequisite: Junior status
Competencies specific to the science of teaching will be introduced in this course. Students will become familiar with the fundamentals of teaching across all content area subject matter at the elementary level. Areas that will be explored include models of teaching, including lesson and unit planning, and creating a classroom environment that is conducive to learning.

EL 357 Pedagogy II 3c-0l-3sh
Prerequisite: Junior status
Principles based on classroom experience. Instruction will include: classroom management skills, integration of computers in the elementary curriculum, contemporary issues in education, the role of research in elementary classroom teaching, and teacher professionalism during and after field experiences.

EL 411 Teaching of Social Studies 3c-0l-3sh
Overview of social studies in elementary school. Includes study of objectives, trends, areas of content, patterns and principles of organization, and techniques of teaching. Variety of learning experiences and materials used and evaluated

EL 422 Diagnostic and Remedial Reading 3c-0l-3sh
Prerequisite: EL222
Causes of reading disability; methods of diagnosis; procedures and materials for remedial work, group and individual.

EL 425 Language Arts Across the Curriculum 3c-0l-3sh
Prerequisites: EL222
Places emphasis on the view that the art of communication is an interrelated process and the task of classroom teachers is not only integrating the language arts among themselves but also integrating them throughout the entire curriculum. Techniques for teaching oral and written communication, spelling, handwriting, vocabulary development, listening, and linguistics will be presented. Special emphasis given to recent trends and research. (Replaces EL 413, Teaching Language Arts effective Summer, 1992) This course is offered as a writing-intensive course.

EL 481 Special Topics var-3sh
Prerequisite: Approval of instructor and department
A course/seminar on topics in education appropriate for the Elementary Education setting.

EL 482 Independent Study var-3sh
Prerequisite: Approval of instructor and department
Advanced work which allows the student to explore the curriculum and instruction which is appropriate for children ages five through twelve. (Offered as EL481 prior to 1993-4)

EN: English
Department of English
College of Humanities and Social Sciences

EN 100 Basic Writing 3c-0l-3sh
Designed to develop the basic English skills necessary for clear and effective communication. Reserved for selected students. This course does not meet General Education English or Liberal Studies writing requirements. (Title prior to 1989 was EN100: Basic English.)

EN 101 College Writing 3c-var-4sh
Prerequisite: EN100, where required by placement testing
Normally to be taken the first semester at IUP. Courses use readings in the nature and history of language, semantic and linguistic analysis, and problems in rhetoric and other approaches to composition. Seven theme-length expository papers (or the equivalent) are written, in addition to shorter exercises and a written final examination. (Title prior to 1989 was EN101: English I.)

EN 121 Humanities Literature 3c-0l-3sh
Prerequisite: EN101
Introduces students to literature of various genres through a careful analysis of poetry, fiction, and drama. Includes literature of various time periods, nationalities, and minorities. (Replaced EN201: English III effective Summer, 1990)

EN 150 English for Foreign Students 3c-0l-3sh
Provides international students with an opportunity to improve their ability to speak and write English before they take EN100 and EN101. The emphasis is on individualized exercises and assignments. This course carries graduation credit but does not meet General Education or Liberal Studies English requirements.

EN 202 Research Writing 3c-0l-3sh
Prerequisites: EN101, sophomore standing
Teaches students to read, analyze, and evaluate nonfiction sources and to present the results of their analysis in clear, organized, carefully documented

research papers. The focus of reading and research in each section will be determined by the instructor. (Replaced EN102: English II effective Summer, 1990)

EN 208 The Art of the Film 3c-0l-3sh
Concentrates on the film as an artistic medium. Eight to twelve motion pictures are shown during semester and are analyzed in class discussions.

EN 210 Introduction to Literary Analysis 3c-0l-3sh
Prerequisite: EN101
Acquaints students with the literary genres (especially fiction, poetry, and drama) by means of examples of each and provides them with some of the various critical approaches to the interpretation of literature so that they may gain the ability to apply them. At the conclusion of the course, students are expected to be able to read literature perceptively and to write critical papers about it.

EN 211 English Literature to the Restoration 3c-0l-3sh
Prerequisites: EN101, 210, or permission
Surveys English literature from its beginnings to the Restoration, acquainting students with the experience of reading many of the primary materials (whole works whenever possible or full, free-standing parts) and provides them with background information concerning the development and flowering of the various genres, the dominant ideas of each period, and the social and cultural context of the separate works.

EN 212 English Literature from the Restoration to 1900 3c-0l-3sh
Prerequisites: EN101, 210, or permission
Surveys English literature from the Restoration to the beginning of the 20th century, acquainting students with the experience of reading many of the primary materials (whole works whenever possible or full, free-standing parts) and providing them with background information concerning the development and flowering of the various genres, the dominant ideas of each period, and the social and cultural context of the separate work.

EN 213 American Literature: Beginnings to the Present 3c-0l-3sh
Prerequisites: EN101, 210, or permission
Provides an understanding of American literature from its beginning to roughly the middle of the present century. The course will concentrate primarily upon a relatively small number of major works, each of which will help to illustrate the "spirit of the age" it represents.

EN 214 The Novel 3c-0l-3sh
Prerequisites: EN101, 210, or permission
This course surveys the development of the novel from Cervantes' *Don Quixote* to the present with emphasis on major writers and forms in English. Includes consideration of teaching the novel.

EN 215 Poetry 3c-0l-3sh
Prerequisites: EN101, 210, or permission
A study in appreciation of poetry, with special attention to the technique of the poet and structure of poetry. Includes consideration of teaching poetry.

EN 216 Short Fiction 3c-0l-3sh
Prerequisites: EN101, 210, or permission
A study of the development of the short story from the middle of the 19th century to the present with attention to form, structure, and types of the story. Includes consideration of teaching short fiction.

EN 217 Drama 3c-0l-3sh
Prerequisites: EN101, 210, or permission
A study of selected plays from various periods in an attempt to understand the function of drama. Includes consideration of teaching drama.

EN 220 Advanced Composition I 3c-0l-3sh
Prerequisites: EN101, 202
Primarily seeks to improve writing style, particularly in the more utilitarian forms, such as magazine article and personal essay.

EN 221 Creative Writing 3c-0l-3sh
Prerequisites: EN101, 202
This is a seminar course in which students are expected to produce a substantial body of written work in one or more of the creative genres, the particular kind of writing chosen with regard to the special interests and abilities of each student.

EN 310 Public Speaking 3c-0l-3sh
Prerequisite: EN101
Fundamental principles of public speaking, audience analysis, interest and attention, and selection and organization of speech material.

EN 311 Oral Interpretation 3c-0l-3sh
Prerequisites: EN101, 310
Emphasizes understanding and appreciation of literature through developing skill in reading aloud.

EN 312 Speech—Persuasion 3c-0l-3sh
Prerequisites: EN101, 202, 310
Advanced study of problems involved in influencing an audience.

EN 313 The Rhetorical Tradition 3c-0l-3sh
Prerequisites: EN101, 310
Survey of rhetorical theory from Greek and Roman through modern times.

EN 314 Speech and Communication in the Secondary English Classroom 3c-0l-3sh
Prerequisites: EN101, 202, 210
Offers students practical and theoretical approaches to relationships between oral and written communication. The course is performance-based (involving a variety of communication activities) and knowledge-based (involving study of research on language arts relationships). Emphasis is given to integration of the four language arts for improving teachers' own communication skills as well as those of their students.

EN 318 Literature for Adolescents 3c-0l-3sh
Prerequisites: EN101, 210, or permission. English Education major.
Surveys poetry, drama, and fiction with which the adolescent is familiar through school work and personal reading. (Offered as EN218 prior to 1993-4.)

EN 320 Advanced Composition II 3c-0l-3sh
Prerequisites: EN101, 202, 220
Workshop and tutorial atmosphere for students who intend to write or teach writing.

EN 321 Creative Writing II 3c-0l-3sh
Prerequisites: EN101, 202, 221
Workshop for students who wish to write fiction or poetry under guidance of instructor.

EN 322 Technical Writing 3c-0l-3sh
Prerequisites: EN101, 202
Focuses on helping the student to acquire and to apply communication skills essential to the technical and professional writer.

EN 323 Teaching Literature and Reading in the Secondary School 3c-0l-3sh
Prerequisites: EN101, 202, 210
Introduces students to the theory and research on teaching literature and reading in the secondary school. Reviews reader-response literary theory and classroom-based research on teaching literature. Also reviews socio-psycholinguistic reading theory and classroom-based research on teaching reading.

EN 324 Teaching and Evaluating Writing 3c-0l-3sh
Prerequisites: EN101, 202, 210, English Education major or permission
A study of modern approaches to the teaching of writing, including current theories on the composing process, as well as instruction in evaluating, including holistic scoring. Includes practice in writing.

EN 329 The History of the English Language 1c-0l-1sh
Prerequisites: EN101, 202
Studies historical development of the English language, as a basis for a better understanding of modern American English.

EN 330 The Structure of English 3c-0l-3sh
Prerequisites: EN101, 202
An introduction to the fundamentals of language study with equal emphasis on the sound, word, sentence, meaning, and discourse patterns of English. Educationally relevant topics, such as applications of linguistics to the teaching of English language and literature, varieties of grammar, and linguistic descriptions of styles and registers are an integral part of the course.

Course is a prerequisite for ED 452: Teaching of English and Speech in the Secondary School.

EN 333 Psycholinguistics 3c-0l-3sh
Prerequisites: EN101, 202
Psycholinguistics concerns the interrelation between language system and behavior and various factors of human psychology. Surveys developments since the 1940s, including relationships between language and perception, biology, memory, meaning, and cognition, as well as oral and written behavior. Students of language and literature may improve their assumptions about how human beings use language.

EN 334 ESL Methods and Materials 3c-0l-3sh
Prerequisites: Junior standing or permission of the instructor
An introduction to English as a Second Language theory and practice. Aims: (1) general understanding of current theory and methods of teaching ESL; (2) ability to select appropriate, and adapt existing, materials for elementary and high school ESL students. Recommended for all English teachers who expect to have ESL students in their classes.

EN 336 Language, Gender, and Society 3c-0l-3sh
Prerequisites: EN101, EN102, junior standing
Investigates the various ways that language and gender interact and intersect in society. Examines such questions as: Does society use language to favor one sex over the other? Why is language a crucial component in formulating constructs of masculinity and femininity? What stereotypes of gender-based language are promoted in our society? How can we analyze language to reveal disparate views and treatment of the sexes?

EN 340 Chaucer 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
Studies Chaucer, his life, his language, the development of his literary style, and his art, with and through his major poetical works.

EN 341 Shakespeare 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
Studies Shakespeare's development as a poetic dramatist against background of Elizabethan stage; examines audience, textual problems, language imagery, and philosophy.

EN 342 Milton 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
A close reading of the major English poems and prose of John Milton, with particular attention to *Paradise Lost* and *Samson Agonistes*.

EN 343 Major American Author 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
Studies in the literary output of a major American author or authors against the background of the social and literary milieus in which the works were created. Specific subject or subjects to be announced by the instructor.

EN 345 Classical Literature in Translation 3c-0l-3sh
Prerequisites: EN101, 102
Masterpieces studied range from those of ancient Greece to Middle Ages. English literature and American literature excluded.

EN 346 Contemporary American and British Poetry 3c-0l-3sh
Prerequisites: EN101, 202
Study of British and American poetry since World War II.

EN 347 Modern American Fiction 3c-0l-3sh
Prerequisites: EN101, 202
Major American writers of fiction since 1945 are considered.

EN 348 African-American Literature 3c-0l-3sh
Prerequisites: EN101, 202
Analyzes significant African-American literature of a variety of types—autobiography, essay, fiction, poetry.

EN 349 English Bible as Literature 3c-0l-3sh
Prerequisites: EN101, 202
Considers literary aspects of the English Bible by relating earlier translations to the Authorized Version of 1611 and by tracing some of the major influences of the King James Bible upon writers and speakers of modern English.

EN 350 The Metaphoric Perspective 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
Acquaints students with the means by which metaphor expands our awareness, providing us in its more extreme examples with what has been called "the strategy of the dream." Specifically the course explores metaphor as a "perspective by incongruity," which may be embedded in poetic structures or may be itself the controlling structure for longer works of fiction and nonfiction.

EN 351 The Literature of Discursive Reason 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213
Examines literature that displays the mind's analytic process. Readings include essays and other nonfiction as well as poetry, drama, and fiction.

EN 352 Symbol and Allegory 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
Examines symbol and allegory as means of comprehending and expressing profound aspects of existence. Explores the distinction between symbolic and allegorical modes of thought.

EN 353 The Oral Dimension 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
Acquaints students with the nature of oral composition, the habits of thought that orality fosters, and the particular mode of awareness the oral dimension of literature demands of an audience (and awakens in a reader). At the conclusion of the course students should have an understanding of the formulaic nature of such purely oral forms as the ballad and the epic and an awareness of the manner in which orality patterns thought differently from writing, and they should be able to detect oral features and patterns in works of literature from cultures not primarily oral but containing a high "oral residue."

EN 360 Romanticism 3c-0l-3sh
Prerequisites: EN101, 202
Corequisites: EN211, 212, 213, or permission
Focuses on literature in its milieu and emphasizes an understanding of Romantic literature from its development in Germany and France to its flowering in England and America.

EN 361 The Renaissance 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
Studies the revolutionary changes in artistic, ethical, and political thinking brought about by the European and English Renaissance as these changes are manifested in the literature of that age and succeeding ones. Focuses in particular upon the origin and later development of such notions as self-development, individuality, and the acquisition and maintenance of power.

EN 362 Chivalry and Courtly Love 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
Aims to give students a broad awareness of the cultural milieu of the High Middle Ages through a study of chivalry and courtly love as well as an understanding of how this literary genre was born, evolved over time and across cultures, and continues to structure elements in our own culture. Examines theories which seek to explain the development of the codes of courtly love and chivalry and the literature which gives evidence of their existence and development.

EN 363 The Puritan Mind in England and America 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
Examines what is distinctive in the intellectual outlooks of Puritanism as it is directly embodied in the literature of England and America in the 16th, 17th, and 18th centuries and indirectly in the literature of later ages down to the present.

EN 370 Myth and Literature 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission

Introduces students to the nature and function of the mythic experience and makes them aware of the integral relation myth has with literature of all times and cultures, including our own. Illustrates how myth creates meaning, orders experience, and enters into literary techniques.

EN 371 Hero and Antihero 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
Examines the range of heroic and antiheroic protagonists and actions in literature of various times and countries with an additional focus upon the specific world views that make heroic and antiheroic behavior effective or even possible.

EN 372 Alienation in Literature 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
Explores literature from various times and places for what it shows us of the separation of self from the external world—the estrangement of human beings from others as well as from themselves—its origin, nature, and various forms.

EN 373 Concepts of Character in Drama and Novel 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
Traces the techniques literary artists employ to portray aspects of personality and examines the influence upon character portrayal of such diverse factors as the chosen genre, contemporary notions of character depiction, and prevailing psychological theories contemporary with the works.

EN 380 Country Life—City Life 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
Investigates the relationship between literature and two relatively distinct social environments—the town and the country. Examines literary genres, modes, and preoccupations peculiar to the separate social climates as well as the body of literature reflecting the painful collision between the two and effects of that collision upon such human concerns as families, the celebration of love and death, or the perception of the substance of nature itself.

EN 381 Poverty and Class in Literature 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
Examines major literary works that document the conditions created by class and caste division and the poverty that is visited upon a portion of the people as well as the social values that seek to justify or condemn class divisions. Examines an extensive body of images of the poor, concepts about class and caste, and the consequence of class division.

EN 382 War in Literature 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
War is a subject depicted, in varying ways, in the literature of many times and places. Beginning with *The Iliad*, some of the major literary treatments of war and the attendant effects on the society and/or individuals placed in this context are explored.

EN 383 Man in the Natural World 3c-0l-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
Attempts to understand the literature which concerns itself with the relationship between nature and humankind by viewing that interaction, at least initially, as either antagonistic or sympathetic: in the first case humanity dominates or exploits, while in the second it participates. The first attitude can be most easily seen in the traditional Hebraic-Christian view, while the second appears as romanticism, or more currently, as ecological awareness.

EN 384 Introduction to Literature by Women 3c-0l-3sh
Reading of women's fiction, nonfiction prose, poetry, and drama, with emphasis on the work of the 19th and 20th centuries in England and America. Both works of well-known writers traditionally included in the English curriculum and the writings of their less well-known contemporaries will be included.

EN 390 Literary Tour: Britain var-3sh
Offered selected summers, for five weeks during the first or second summer session. Visits London, Stratford, and Cambridge or Oxford, as well as other places important in English literature.

EN 480 Seminar: Studies in English and American Literature var-3sh
Prerequisites: EN101, 202, 210
Corequisites: EN211, 212, 213, or permission
A seminar experience designed for advanced students. Students considering graduate work in English might well wish to enroll, but students with a variety of career goals—business, industry, law, government service—can take advantage of this opportunity to plan a schedule of independent study with the help of a faculty mentor.

EN 481 Special Topics var-1-3sh
Vary from semester to semester, covering such diverse topics as autobiography, science fiction, folklore, the political novel, black theater, etc.

EN 482 Independent Study var-1-6sh
Opportunities for independent study that go beyond the usual classroom activities. Approval of department chairperson required.

EN 493 Internship var-3-12sh
On-the-job training opportunities in related areas. Application and acceptance to internship program required

EP: Educational Psychology
Department of Educational Psychology
College of Education

EP 202 Educational Psychology 3c-0l-3sh
Prerequisite: PC101, admission to sophomore standing in teacher certification or permission
Designed to promote a better understanding of the principles of psychology governing human behavior, with particular emphasis on their relation to learner, learning process, and learning situation in an educational environment. (Offered as EP302 prior to 1992-93)

EP 303 The Psychology of Effective Professional Presentations 3c-0l-3sh
Designed to give students awareness and skills in the areas of professional presentations. Concerned with dress, diction, and decorum. Emphasis on effective speaking and professional dress, with particular attention to the interview

EP 304 Career Planning and Development 1c-0l-1sh
Designed to explore and define personal professional goals. Resume writing, letters of application, networking, credentials file, and interview techniques are stressed. Background experiences, projected lifestyle, and academic preparation are integrated as foundations of job search

EP 371 Psychology of Teaching Sex Education 3c-0l-3sh
Explores the methods of teaching sex education to elementary, intermediate, and secondary levels; the sexual development of the child through adolescence and adulthood

EP 373 Psychology of Adolescent Education 3c-0l-3sh
Prerequisite: EP202
Study of significant characteristics, behavior, and educational and social problems of adolescents.

EP 376 Behavior Problems 3c-0l-3sh
Prerequisite: EP202
Examination of emotional and social aspects of behavior problems encountered in classroom situations and potential remedial techniques.

EP 377 Educational Tests and Measurements 3c-0l-3sh
Prerequisites: PC101, admission to junior standing in teacher certification or permission
Designed to acquaint students with major methods and techniques of evaluation used to assess and report growth, development, and academic achievement of individuals in an educational environment. Includes interpretation of standardized test information.

EP 378 Learning 3c-0l-3sh
Prerequisite: EP202
Explores learning theories and educational application in the classroom.

EP 383 Education of the Disadvantaged Student 3c-0l-3sh
Prerequisite: EP202
Acquisition of necessary understandings of physiological, psychological, and social implications relevant to working with and teaching the disadvantaged student.

EP 384 Field Experience 3c-0l-3sh
Prerequisite: EP202
Provides student with tutorial experience in the public schools and social service organizations with professional supervision

EP 388 Interpersonal Effectiveness and Communication Skills 3c-0l-3sh
Devoted to increasing professional effectiveness and improving communication skills within educational, business, and industrial settings Includes analysis of nonverbal behaviors, active listening, rational self-analysis, and assertion skills

EP 481 Special Topics in Educational Psychology 3c-0l-3sh
Prerequisite: Department chairperson permission
Provides opportunity for students to investigate in depth an area of Educational Psychology under professional supervision.

EP 499 Independent Study var-1-3sh

EX: Education of Exceptional Persons
Department of Special Education and Clinical Services
College of Education

EX 111 Introduction to Exceptional Persons 3c-0l-3sh
Prerequisite: For department majors and official incoming transfers only
Surveys characteristics, needs, problems, and behavior patterns of any person who deviates sufficiently from "normal" to be considered exceptional Consideration to those who fall intellectually both above and below average and to those who are handicapped visually, acoustically, behaviorally, orthopedically, neurologically, or in respect to speech patterns. (Offered as EX120 prior to 1993-4)

EX 112 Typical and Atypical Growth and Development 3c-0l-3sh
Prerequisites: EX120, PC101
Presents foundations of human growth from conception, including basic embryogenesis, up to but not including adolescence Considers the biological, cultural, educational, and parenting influences that shape the child, as well as selective examples of normal and deviant physical and intellectual development. (Offered as EX220 prior to 1993-4)

EX 221 Methods of Teaching Mathematics to Persons with Disabilities 3c-0l-3sh
Prerequisites: MA151, EX120
Emphasizes recent developments in elementary curriculum and instructional techniques for developing concepts; implications of recent resource developments and materials helpful to the prospective special education teacher. Emphasis is also placed on methods of helping children learn mathematical concepts through physical activity and on ways to adapt regular classroom materials to meet needs and abilities of slow and disabled learners. (Offered as EX240: Teaching Mathematics for the Mentally and/or Physically Handicapped prior to 1993-4)

EX 222 Methods of Teaching Reading to Persons with Disabilities 3c-0l-3sh
Prerequisite: Sophomore status or above
Presents basic concepts of developmental reading instruction and systematic coverage of the methods of teaching reading from readiness stages through eighth grade. Diagnostic-prescriptive techniques are included. (Offered as EX251: Methods of Teaching Reading prior to 1993-4)

EX 300 Education of the Exceptional in the Regular Classroom 3c-0l-3sh
Prerequisite: For non-Special Education majors only
Surveys traits, needs, problems, and behavior patterns of the exceptional person and indicates methods and considerations for the regular classroom teacher encountering the exceptional person in his/her classroom. Legal rights of the exceptional are stressed, and contributions of the disabled to society are presented Implications regarding parenting of exceptional children and youth are included

EX 321 Methods of Teaching Language Arts to Persons with Disabilities 3c-0l-3sh
Prerequisites: EX120, EX251, and SH254
Review of typical and atypical characteristics of the handicapped in relationship to the language arts Deals with preparation and execution of units of instruction in language arts for mentally and/or physically handicapped persons. Diagnostic and prescriptive approaches are included, integration of language arts with a highlight on reading is stressed (Offered as EX353: Reading and Other Language Arts for the Mentally and/or Physically Handicapped prior to 1993-4)

EX 322 Methods of Teaching Content Area Subjects to Persons with Disabilities 3c-0l-3sh
Prerequisite: EX120
Presents methods for teaching science and social studies to the mentally and/or physically handicapped. Scope and sequence of content, as well as evaluative techniques for each content area, are studied. Integration of other content areas and skill areas is stressed Also stresses teaching in both resource room and less restrictive environments (Offered as EX343: Content Area Subjects for the Mentally and/or Physically Handicapped prior to 1993-4)

EX 340 Introduction to Behavior Management in Special Education 3c-0l-3sh
Prerequisites: EX111, EX112, EP202
An overview of systematic behavioral change techniques for use with students in a variety of special education settings including integrated, resource, self-contained, special school, and residential. Emphasizes a case analysis approach to creating and evaluating behavioral changes for students with mild to severe disabilities.

EX 341 The Socially and Emotionally Maladjusted 3c-0l-3sh
Prerequisite: Departmental permission
Provides for an understanding of the characteristics and educational programming for the socially and/or emotionally maladjusted. Considers the relationship between socially and emotionally maladjusted and other areas of exceptionality.

EX 415 Preschool Education for Children with Disabilities 3c-0l-3sh
Prerequisite: Departmental permission
Provides information on assessment, intervention strategies, curriculum, and prescriptive planning for preschool children with disabilities. Serves as a course for departmental majors who are specifically interested in early childhood education, as an elective for other interested students in related fields, and as a priority course for Early Childhood Education majors. (Formerly EX464, Preschool Education of the Handicapped)

EX 416 Education of Persons with Emotional or Behavioral Disorders 3c-0l-3sh
Prerequisite: Junior status or above
Focuses on major theoretical positions regarding etiology of emotional and behavioral disorders, definition and identification of the population, and educational approaches. Reviews research in the field, including current issues, trends, practices, and services. (Formerly EX341: The Socially and Emotional Maladjusted)

EX 417 Education of Persons with Mental Retardation or Developmental Disabilities 3c-0l-3sh
Prerequisite: Junior status or above
Focuses on major theoretical positions regarding etiology of mental retardation and developmental disabilities, including autism. Definition, identification, and educational approaches are discussed. Reviews research in the field, including current issues, trends, practices, and services. (Formerly EX457: Severe and Profound Retardation and Multiple Disabilities)

EX 418 Education of Persons with Physical or Multiple Disabilities 3c-0l-3sh
Prerequisite: Junior status or above
Focuses on major theoretical positions regarding etiology of a wide and diverse range of physical/multiple disablities, the definition and identification of the population, and educational approaches. Reviews research in the field, including current issues, trends, practices, and services. (Formerly EX430: Physical Disabilities and Psychological Handicaps)

EX 419 Education of Persons with Brain Injuries or Learning Disabilities 3c-0l-3sh
Prerequisite: Junior status or above
Focuses on major theoretical positions regarding etiology of neurological and learning disabilities, definition and identification of the population, and educational approaches. Reviews research in the field, including current issues, trends, practices, and services. (Formerly EX454 The Brain Injured and the Learning Disabled)

EX 425 Methods and Curriculum (Mild-Moderate Disabilities) 3c-0l-3sh
Prerequisites: EX221, EX222, EX231, EX322, EX340
Provides in-depth examination of assessment methods, strategies, and curriculums. Emphasizes assessment methods and strategies used in a variety of service models that serve elementary- and secondary-level students with learning disabilities, behavioral disorders, mild mental retardation, and high-function autism. (Formerly EX450: Methods and Curriculum Planning for Mildly and Moderately Handicapped)

EX 430 Physical Disabilities and Psychological Handicaps 3c-0l-3sh
Prerequisites: EX120, EX220
Provides for in-depth study of the most prevalent physical disabilities, indicates coping mechanisms used by some of the afflicted, and shows how the physically disabled who do not develop coping strategies become psychologically handicapped. Adaptation of teaching materials, equipment, and facilities is discussed. Rationale for placements in the various educational environments is included.

EX 435 Methods and Curriculum (Severe-Profound Disabilities) 3c-0l-3sh
Prerequisites: EX221, EX222, EX223, EX321, EX340
Emphasizes methods designed to facilitate the development of an integrated, functional, and community-based curriculum that will prepare students for participation in a wide variety of postschool environments.

EX 440 Ethical and Professional Behavior 1c-0l-1sh
Prerequisite: Departmental permission
Emphasis on ethical and professional behavior for student teachers and professional employees. Possibilities for and methods of initiating and profiting from postbaccalaureate study are indicated. Student teachers are required to complete and present a curriculum book regarding each student-teaching experience. (Offered as EX490 prior to 1993-4)

EX 450 Methods and Curricular Planning for Mildly and Moderately Handicapped 3c-0l-3sh
Prerequisite: Departmental permission
Provides for in-depth examination of methods, strategies, and curriculums with which special educators are faced. Special projects of a practical nature are included to provide enrollees experiences with planning, application, analysis, synthesis, and evaluation. To be scheduled the semester immediately preceding student teaching.

EX 454 The Brain Injured and the Learning Disabled 3c-0l-3sh
Prerequisite: Departmental permission
Provides guidelines and methods of teaching the brain injured and learning disabled. Emphasizes methods of providing basic skill development in areas of motor, perceptual, cognitive, language, and social skills.

EX 457 Severe and Profound Retardation and Multiple Disabilities 3c-0l-3sh
Prerequisite: Departmental permission
Provides guidelines and methods for working with the extremely disabled in educational settings. Emphasizes methods of providing stimulation of basic skill development in areas of motor, perceptual, cognitive, language, and social skills.

EX 464 Preschool Education of the Handicapped 3c-0l-3sh
Prerequisite: Departmental permission
Provides the student with basic concepts for educating all preschool handicapped youngsters and serves as a course for exceptional education majors specifically interested in early childhood education and intervention programs. Required for elementary majors in the early childhood program, course is an elective for other interested students.

EX 480 Seminar in Special Education var-1-3sh
Prerequisite: Departmental permission
Interested students may use this course for the pursuit of knowledge regarding specific concerns of the exceptional which are not ordinarily considered in such detail during regular classroom instruction. Students wishing to enroll are expected to submit a written proposal regarding their desire for study at the time permission for enrollment is sought. With permission, the course may be repeated for credit. (Previous title: Selected Problems)

FA: Fine Arts
College of Fine Arts

FA 493 Internship var-3 to 12sh
Covers the areas of the visual and performing arts.

FE: Foundations of Education
Department of Foundations of Education
College of Education

FE 202 American Education in Theory and Practice 3c-0l-3sh
Prerequisite: Students must have sophomore status and be enrolled in a teacher certification program.
Provides an introduction to some of the major traditional and contemporary philosophic concepts which have played a role in the formation of educational policies and practices. Emphasis on the relationship between educational theory and practice in such areas as the role of the school in society, curricular content, teaching and learning methodology, educational goals, and professionalism.

FE 414 Comparative Foundations of Education (Dual Level) 3c-0l-3sh
Analysis, evaluation, and especially comparison of educational purposes, curriculum, and methods in some western European nations, some developing nations in Africa, Asia, and Latin America, and nations such as Russia and the Peoples Republic of China. The educational theories and practices in the United States will be compared with those in other lands. Designed to develop insight into new ideas and practices in American schools.

FE 415 Curriculum Development (Dual Level) 3c-0l-3sh
Analysis of philosophical, sociological, and psychological basis for creation of curricular patterns, K-12. Includes utilization of technological devices, critical examination of basic concepts underlying determination of objectives, and selection and organization of subject matter and of learning experiences in general. Current curriculum research will be analyzed, as will existing instructional materials and programs.

FE 440 Orientation to Teaching in Urban Centers 3c-0l-3sh
Provides students with an understanding of learners and their unique learning needs and conditions. Emphasis on understanding the origin of attitudes and values and how these affect the relationships which exist between students and teachers. Special attention to practical application of theoretical information to problems of urban education. Field trips and guest speakers will be emphasized.

FE 441 Field Experiences in Urban Centers var-6sh
Prerequisite: FE440
Provides specialized experience for students desiring to teach in inner-city schools. Aspects to be emphasized include physical characteristics of community, background and aspirations of children and youth, and specialized teacher competencies, classroom management, planning, instructional materials, teaching strategies, and evaluations. Records of comprehensive experiences in urban areas will be considered in making field experience assignments. Schools selected for student experience will be located in Pittsburgh.

FE 442 Interpreting Urban/Field Experiences var-3sh
Prerequisites: FE440, FE441
Evaluation of learning and behavior problems encountered during field experience in urban schools. Flexible approach stressed to encourage wide range of investigation and exploration of psychological and sociological problems as they affect education. Supervision and guidance for investigating specific problems provided by specialists from psychology, sociology, and education who will function as resource personnel giving direction. Enables

students to combine experiences gained by teaching in urban schools with recent and pertinent theoretical information

FE 454 Public School Administration 3c-0l-3sh
Study of the development of public school administration; current organizational patterns for public education at the local, county, state, and national levels; and the impact of administration upon the total educational program.

FE 456 Issues and Trends in Education (Dual Level) 3c-0l-3sh
Critical analysis of issues and trends in education with emphasis on philosophical and social dimensions of topics covered. Attention to work of some major contemporary critics of education.

FI: Finance
Department of Finance and Legal Studies
College of Business

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

FI 220 Essentials of Finance 3c-0l-3sh
Provides students with a survey of three fundamental areas of finance: 1) Corporate Finance, 2) Basic Investment, and 3) Financial Intermediation and the Monetary System. Students will be introduced to financial analysis, planning, and control; to the management (the acquisition and allocation) of funds; and to the fundamentals of the time value of money and capital budgeting. Students will be familiarized with the basic investment markets, fundamental and technical analysis, and portfolio analysis. Students will also consider the influence of government and financial institutions on interest rates, sources of finance, investment of funds, and finance in general. (Offered for Associate Degree Program at branch campuses only; may not be used as a substitute for FI310)

FI 310 Finance I 3c-0l-3sh
Prerequisites: AG202, MA214 for business majors;
AG202, MA214 or MA217 for non-business majors (MA214 recommended)
Study of the methods of securing and managing funds on short, intermediate, and long-term bases. The financial analysis, planning, and control of a corporation. Also covered is working capital management

FI 320 Finance II 3c-0l-3sh
Prerequisites: FI310, upper division only
Continues FI310 and covers topics on long-term external financing of the firm, capital budgeting, valuation of the firm, mergers, international business finance, and business failures.

FI 322 Life Insurance 3c-0l-3sh
Prerequisite: FI310
Comprehensive study of that insurance which provides protection against the economic loss caused by termination of earning capacity. Analysis benefits, underwriting, rate making, and legal doctrines.

FI 324 Principles of Investments 3c-0l-3sh
Prerequisite: FI310
Analysis of various types of securities and other forms of investment possibilities and a study of sound investment policies from a corporate viewpoint. Factors influencing the general movement of security prices and the return from investments are considered.

FI 382 Real Estate Fundamentals 3c-0l-3sh
Designed to acquaint the student with the language, principles, and laws that govern the business of real estate. Emphasis on the underlying concepts of land, property, rights in realty, and the means, methods, and laws that govern the conveyance of these rights. Required course for taking the Pennsylvania Real Estate Sales Exam.

FI 385 Securities and Commodities Markets 3c-0l-3sh
Prerequisites: FI320, FI324
Study of the structure of security and commodity markets; the nature of speculative transaction and methods of trading; analysis of pricing; and the objectives of security and commodity market regulation.

FI 410 Financial Institutions and Markets 3c-0l-3sh
Prerequisite: FI324
Review of the entire structure of financial institutions, money, and capital markets, of which the business enterprise is both a supply and demand factor, and structure and dynamics of interest rate movements

FI 420 Investment Analysis 3c-0l-3sh
Prerequisites: FI320, FI324
Integrates the work of the various courses in the finance areas and familiarizes the student with the tools and techniques of research in the different areas of investments.

FI 422 Seminar in Finance 3c-0l-3sh
Prerequisites: FI320, FI324, seniors only
Primarily for the senior Finance major, covers topics in all areas of finance by using recent articles, cases, discussions, speakers, and a financial simulation game.

FI 481 Special Topics In Finance var-3sh
Prerequisite: Consent of departmental chairperson and dean, College of Business

FI 482 Independent Study var-3sh
Prerequisite: Consent of department chairperson and dean
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member.

FI 493 Finance Internship var-3-12sh
Prerequisites: FI320, FI324, consent of chairperson and dean
Practical experience in the finance field
Note: Internship FI493 can be taken, if the student qualifies, as a general elective. It does not fulfill the major-area elective requirement.

FL: Study Abroad and Comparative Literature (Foreign Language)
College of Humanities and Social Sciences

FL 100 Study Abroad var-1-12sh
Registration mechanism and limited credit arrangement as provided in preapproval process for Study Abroad programs coordinated through the Center for International Studies.

FL 121 Humanities Literature 3c-0l-3sh
Introduces the student to works, authors, and genres of general literary significance in the Western tradition. Not organized historically but trains the student in the critical reading and appreciation of literature from the present and other periods. Authors, works, and themes are studied with respect to cultural context, aesthetic form, and thematic significance. Taught in English. Substitutes for EN121: Humanities-Literature.

FL 391 Selected Works from the Medieval Period 3c-0l-3sh
Prerequisites: EN101, 102
Comparative study of selected works of major importance per se and as representative of major themes of medieval European literature. Also listed as EN391.

FL 392 Renaissance/Baroque/Classical 3c-0l-3sh
Prerequisites: EN101, 102
Literary works representing various genres from both periods are studied and compared for their themes, motifs, and stylistic features, applying principles set forth in H. Wolffin's *Renaissance and Baroque*. Also listed as EN392.

FL 393 Romanticism 3c-0l-3sh
Prerequisites: EN101, 102
Study of the principal authors and works of late 18th-century and early 19th-century Europe and the unique national characteristics of the Romantic movement in lyric, drama, and prose. Also listed as EN393.

FL 394 Nineteenth-Century European Novel in Translation 3c-0l-3sh
Prerequisites: EN101, 102
A survey of major 19th-century European novels in translation (excluding English), emphasizing the rise of realism and naturalism and the cultural, historical, social, and artistic relationships between the various national literatures. Also listed as EN394.

FL 395 Selected Writers from 20th-Century Europe 3c-0l-3sh
Prerequisites: EN101, 102
Comparative study of selected works of major importance per se or as representatives of major trends in 20th-century literature. Also listed as EN395.

FL 396 The Literature of Emerging Nations 3c-0l-3sh
Prerequisites: EN101, 102
A comparative study of a selection of literature written in major European languages but originating in the nations of the developing world. Works will be mainly prose fiction (although essay, theater, and poetry may be included) and reflect a diversity of geographical, cultural, and prior colonial circumstances. Also listed as EN396.

FL 421 Language and Society 3c-0l-3sh
Considers salient facts of language and its role in society and culture. Language families, linguistic change, and reciprocal influences of culture and language are presented.

FL 482 Independent Study var-1-3sh
An opportunity to engage in an in-depth analysis of some topic dealing with an aspect of foreign languages through consultation with a faculty member. Permission required.

FN: Food and Nutrition
Department of Food and Nutrition
College of Health and Human Services

FN 110 Careers in Food and Nutrition 1c-0l-1sh
Career possibilities for nutrition majors are explored. Students will be guided in clarifying their professional goals and will become acquainted with the educational and experiential requirements necessary to attain these goals.

FN 140 Nutrition and Wellness, Part A 2c-2l-1.5sh
Introduces the student to contemporary nutrition issues as they relate to personal choices and physical fitness as a component of wellness. (Combined with FN141 as FN143 effective 1992)

FN 141 Nutrition and Wellness, Part B 2c-2l-1.5sh
Introduces the student to physical fitness, stress management, and substance abuse as components of wellness. (Combined with FN140 as FN143 effective 1992)

FN 143 Nutrition and Wellness 3c-0l-3sh
Introduces the student to the major components of wellness: contemporary nutrition issues as they relate to personal food choices, physical fitness, stress management, sexually transmitted diseases, AIDS, and substance abuse. Completion of FN143 fulfills the Liberal Studies Health and Wellness requirement.

FN 145 Introduction to Nutrition 3c-0l-3sh
Provides students with an understanding of essential nutrients and their roles in the body, as well as the changing nutritional needs of an individual throughout the lifespan. Includes the impact of exercise and food choices on metabolism, body composition, and weight control; nutrition misinformation; consumer issues; commercially prepared foods; and major diseases that are affected by eating behaviors.

FN 150 Foods Lecture 3c-0l-3sh
Prerequisite (or concurrently): CH102
Basic principles of food, to include composition, sanitation, preparation, and preservation.

FN 151 Foods Lab 0c-3l-1sh
Prerequisite (or concurrently): FN150
Application of basic principles of food preparation.

FN 212 Nutrition 3c-0l-3sh
Prerequisite: CH102 or CH112
Sources and functions of nutrients, interdependence of dietary essentials, and nutritive value of an optimum diet are studied. Attention given to varied conditions in human life.

FN 213 Life Cycle Nutrition 3c-0l-3sh
Prerequisite: FN212
A detailed study of nutrition which applies information from FN212: Nutrition to all stages of the life cycle; current issues and research as they impact on these developmental stages.

FN 245 Sports Nutrition 1c-0l-1sh
Prerequisites: FN143, or FN145, or FN212
Students' nutrition knowledge will be advanced with special application to the optimal nutrient needs and nutrition practices of athletes to maximize performance. The fallacies of ergogenic aids will also be discussed.

FN 321 Professional Employment Practicum var-0sh
Prerequisites: FN 313 plus 60 semester hours
Sophomore or junior summer is used for an employment experience in an approved food service facility. Students seek their own position. Assistance and guidance given by department chairperson.

FN 355 Nutrition in Disease I 3c-0l-3sh
Prerequisites: BI155, CH102, FN212
Basic tools for diet modification: food exchange systems; interviewing techniques; nutrition assessment; professional practice; dietary treatment of injury, surgery, recovery, obesity, and diabetes. Nutrition support. Food sampling experiences. Fall semester.

FN 357 Special Problems in Foods 0c-4l-3sh
Prerequisite: FN150
Individual problems in foods investigated with emphasis on identified weaknesses in the student's knowledge of food.

FN 362 Experimental Foods 2c-3l-3sh
Prerequisites: FN150, 212, CH102, or CH112
The experimental study of foods, relating chemical and physical properties to reactions and processes occurring in food systems.

FN 364 Methods of Teaching 3c-0l-3sh
Prerequisites: FN313 and 356 or concurrently
Current teaching techniques and resource materials in nutrition education emphasized. Both classroom teaching and on-the-job training programs are included.

FN 402 Community Nutrition 3c-0l-3sh
Prerequisite: FN212
Nutritional implications of both good and poor nutrition for all age groups in home and community situations are studied. Corrective and preventive measures emphasized. Spring semester.

FN 410 Food, Nutrition, and Aging 3c-0l-3sh
Prerequisite: Junior status
Relationship of food to health maintenance and special dietary problems during the middle and later years.

FN 430 Professional Topics in Food and Nutrition 3c-0l-3sh
Prerequisites: FN355, FN364, HR356, and PC101
Topics include promoting food and nutrition services and programs, career planning and development, ethical challenges to dietitians, quality assurance standards, and impact on the legislative process.

FN 444 Food Composition and Biochemistry 3c-0l-3sh
Prerequisites: CH355
Basic chemistry and biochemistry of essential components of food originating from plant and animal sources.

FN 447 Nutritional Aspects of Food Technology 3c-0l-3sh
Prerequisites: FN212 and BI232, junior status
Study of current known effects of food processing techniques on the nutritional value and safety of foods.

FN 455 Nutrition in Disease II 3c-0l-3sh
Prerequisite: FN355
Dietary treatment of disorders of the gastrointestinal, renal, cardiovascular, and hepatic systems; inborn errors of metabolism; allergies; cancer. Therapeutic quackery. Food sampling experiences. Spring semester only.

FN 458 Advanced Human Nutrition 3c-0l-3sh
Prerequisites: CH351 or 355 or, concurrently, FN212, BI155
In-depth study of the nutrients and their functions within the cell. Incorporation of the principles of physiology and biochemistry in the study of

nutrition. Emphasis on current research and evaluation of research methodology.

FN 461 Microwave Cooking Technology 2c-2l-3sh
Study of the electronic technology, selection, care, and use of the microwave oven. Basic physical and chemical concepts related to microwave cooking are included. Individual investigative research problems are required.

FN 462 Advanced Experimental Foods 1c-4l-3sh
Prerequisites: FN362, CH231
An experimental approach to the many factors influencing the chemical and physical properties of food. Use of the scientific method in developing an individual project combining an evaluation of current literature and appropriate sensory and analytical methodology.

FN 463 Nutrition Counseling 2c-3l-3sh
Prerequisites: FN355, PC101, FN455 or concurrently
Use of intervention strategies in prevention and treatment of disease through diet. Supervised practicum (3 hours per week) counseling clientele in normal and therapeutic nutrition.

FN 464 Food and Nutrition Research Methods 3c-0l-3sh
Prerequisites: FN362, 458, CH351, and MA217
Introduction to research methodology in foods and nutrition. Includes theory and techniques of physical, chemical, and instrumental analysis. Applications of these methods to food and animal models with statistical analysis of data.

FN 470 Human Food Consumption Patterns 3c-0l-3sh
Prerequisites: One social science course and junior standing
Exploration of human food consumption behaviors from food production to individual and societal consumption patterns. Influencing factors which will be discussed include agronomic, economic, geographic, sociologic, nutritional, political, and psychological factors. The ethics and morality of food distribution will be discussed. Students may not enroll in this course if they have taken the section LS490 that corresponds to this course.

FN 482 Independent Study var-1-6sh
Prerequisite: Must have earned 60 semester hours
Opportunity to pursue special interests beyond the scope of regular class offerings. Permission of instructor and approval of department chairperson required. (Undergraduate maximum is 12 semester hours.) Must apply for Independent Study a semester in advance.

FN 484 Senior Seminar 1c-0l-1sh
Prerequisites: Senior status, FN458, FN464 or concurrently
Emphasis on individual review of food and nutrition literature with formal presentation and discussion of current research.

FN 493 Internship var-6-12sh
Prerequisite: Must have earned 57 semester hours
An opportunity for students to work away from the university in supervised job situations at health care facilities, restaurants, or other institutional food service or lodging establishments. Objective is to provide students with job-related experiences. Must meet university internship requirements.

Note: White uniforms including white shoes are required for all lab courses where food is prepared. Students must meet the professional dress requirements of the department.

FR: French
Department of French
College of Humanities and Social Sciences

FR 101 Basic French 4c-0l-4sh
For the student beginning the study of French or who needs remedial study before beginning the intermediate sequence. Primary emphasis is on the mastery of French pronunciation and oral communication. Students will learn to converse in simple present time and become acquainted with location of Francophone populations and elements of their daily lives. Attendance and Foreign Language Learning Center practice is required. (Replaces FR151 and 152)

FR 201 College French I 3c-0l-3sh
The initiation of college-level mastery of basic language skills and exposure to cultural materials. Supplements beginners' oral competency with more advanced reading and writing. Emphasis on narration in the past. Efforts are made to practice skills and comprehend texts in authentic cultural contexts. Liberal Studies elective credit is given for this course. (Replaces FR251)

FR 202 College French II 3c-0l-3sh
Prerequisite: FR201 or equivalent
This course continues the college-level mastery of language skills. The ability to narrate present and past is intended to express opinion and hypothesis. Emphasis is on acquiring greater skill in reading literary and cultural texts. Liberal Studies elective credit is given for this course. (Replaces FR252)

FR 203 Accelerated College French 6c-0l-6sh
Develops listening and speaking skills through an immersion method. Students use present, past, and future to indicative tenses in intensive aural/oral interaction and are expected to make use of the audio and video capabilities of the Foreign Language Learning Center on a weekly basis. Liberal Studies elective credit is given for this course. (Replaces FR251-252)

FR 221 Conversation III 2c-0l-2sh
Gives students opportunity to practice the grammatical knowledge they acquire in a corresponding class and develops their oral skill. Stresses phonetics, pronunciation, and vocabulary.

FR 222 Conversation IV 2c-0l-2sh
Continues the study of phonetics to improve students' pronunciation. Readings of relatively short texts followed by questions and answers. Some informal conversation to increase the vocabulary, to be able to react spontaneously to a given situation, and to carry the oral skill to a higher level.

FR 253 Intermediate Composition and Conversation 3c-0l-3sh
Intermediate course in grammar, reading, composition, and some oral work. Can substitute for or be in addition to FR252 for majors or serious students.

FR 254 Civilization of Modern France 3c-0l-3sh
Prerequisite: FR252 or equivalent
Study of modern French culture and civilization—social institutions, government, industry, economics, and geography. Development of all language skills for use in business situation in French-speaking environment. Emphasis on acquisition of an active knowledge of the business world.

FR 255 The Art of Translation (version) 3c-0l-3sh
Prerequisite: FR252 or equivalent
Practice in the skills needed to translate from the foreign language into English. Students will analyze problems of translation as they occur in scientific, business, journalistic, and literary texts.

FR 301 Portraits of Women in the French Novel 3c-0l-3sh
Explores the polarity of the treatment of female characters in the French novel. Explores differences of treatment by male and female writers through inclusion of women novelists. Provides a chronological survey of the development of the novel in France from the 17th to the 20th centuries.

FR 321-322 Advanced Conversation I and II each 1c-0l-1sh
Designed to increase speaking ability. The variety of content permits repetition of these relatively informal courses.

FR 351-352 Advanced French I and II each 3c-0l-3sh
Reviews grammar in depth, analyzes the structure of the language; frequent themes required.

FR 354 Business French 3c-0l-3sh
Prerequisite: FR 254 or permission of instructor
Study of principles and practices of business communication in French secretarial and administrative procedures with an emphasis on the planning and writing of business letters, reports, and abstracts of articles in business and economics.

FR 361 Development of French Culture and Literature I 3c-0l-3sh
Provides a general background in French cultural history including art, architecture, and music and in social and political ideas and a general survey of literature. The course spans the period from the Middle Ages to the French Revolution.

FR 362 Development of French Culture and Literature II 3c-0l-3sh
This course provides a general background in French cultural history including art, architecture, and music and in social and political ideas and a general survey of literature. Spans the period from Pre-Romanticism to the present.

FR 363 Medieval and Renaissance Literature 3c-0l-3sh
A study of the major literary works of the period, beginning with the Chansons de gestes and emphasizing the evolution of ideas and the various literary genres

FR 365 Seventeenth-Century French Literature 3c-0l-3sh
A study of the major Baroque and neoclassical works in poetry, theater, and prose with special attention to the evolution of ideas and the French moralist tradition.

FR 366 Eighteenth-Century French Literature 3c-0l-3sh
A study of the Age of Enlightenment in its principal authors and works, including the popularization of ideas for and by secondary authors; a survey of the century's intellectual and literary crosscurrents in French literature and the wider scope of foreign influences.

FR 367 Nineteenth-Century French Literature 3c-0l-3sh
A study of the literature of 19th-century France with particular attention to the development of the novel while also treating the genres of poetry and theater Attention is given foreign influences and correlations.

FR 368 Twentieth-Century French Literature 3c-0l-3sh
A survey of the poetic, theatrical, and narrative genres of the French 20th century with emphasis on the interaction between philosophical development and literary expression.

FR 371 The French Novel 3c-0l-3sh
Elective survey of the origin and development of the French novel Works representative of major genres are read in their entirety

FR 372 Studies in Contemporary French Literature 3c-0l-3sh
Content of this course will vary in accordance with needs and interests of those who elect it.

FR 481 Special Topics var-1-3sh
Designed to meet special needs of a student group.

FR 482 Independent Study var-1-3sh
An opportunity to engage in an in-depth analysis of some topic dealing with the French language and culture through consultation with a faculty member Permission required.

FR 493 Internship var-3-12sh
Prerequisite: One semester of study in France
A supervised field experience in France with approved public agencies and institutions or private firms; no longer than one semester and no less than one month. Positions will be matched as closely as possible with the intern's personal interests and professional goals. For more information, contact the director of the Internship Abroad Program

GE: Geography
Department of Geography and Regional Planning
College of Humanities and Social Sciences

GE 101 Introduction to Geography: Human Environment 3c-0l-3sh
Throughout history, human life and society have been shaped by the physical environment. Today, human activity threatens that environment. The relationship between humans and environment is examined in the context of the surface processes of weather, climate, plate tectonics, population distribution, and soil formation. Topics include agriculture, acid rain, global warming, deforestation, desertification, erosion, volcanism, and pollution.

GE 102 Geography of United States and Canada 3c-0l-3sh
The cultural landscape of North America is studied. The relationship between man and environment is examined and spatial patterns of environment, economy, society, and politics are considered.

GE 103 Introduction to Human Geography 3c-0l-3sh
Human society and human behavior are shaped by space. In this sense, geography is destiny. Some of the ways space affects our lives are examined. Migration, diffusion, settlement, distance decay, spatial behavior, politics, and population are treated from a geographic perspective.

GE 104 Geography of the Non-Western World 3c-0l-3sh
Relates theories of the discipline of geography to problems in the developing world. Emphasizes geographic components of dependency theory, indigenous versus industrial strategies of resource management; world systems theory, spatial legacies of colonialism; and development economics, theories of migration and urban structure, to explore causes, characteristics, and consequences of underdevelopment.

GE 213 Cartography I 3c-0l-3sh
Introduces students to principles of thematic map construction. Emphasis is on the techniques of choropleth mapping and the production of scientific graphs and charts.

GE 230 Cultural Geography 3c-0l-3sh
Introduction to cultural geography, including population, settlement, historical, urban, and political geography, human relationships with the natural environment, and the literature and methods of cultural geography.

GE 231 Economic Geography 3c-0l-3sh
Introduction to geographic concepts, methods, and skills related to spatial patterns of production, consumption, and exchange over the earth's surface.

GE 241 Physical Geography 3c-0l-3sh
Introduction to physical geography including the study of weather, climate, soils, vegetation, landforms, energy cycles, and the hydrologic cycle.

GE 251 Geography of Pennsylvania 3c-0l-3sh
Regions of Pennsylvania are examined in detail to identify man-environment relationships. Soils, topography, climate, vegetation, population, and economic patterns are studied

GE 252 Geography of Latin America 3c-0l-3sh
Impact of rapid population growth and economic development on the environment and spatial organization of Latin America are considered. The resource base and cultural heritage of the region are studied.

GE 253 Geography of Europe 3c-0l-3sh
Investigates relationships underlying land use, dominant international problems, boundary disputes, and regional complexes of the European continent.

GE 254 Geography of USSR 3c-0l-3sh
Regions of the Soviet Union, natural resources, cultural patterns, population, strategic areas, and related geopolitical problems are studied.

GE 255 Geography of Africa 3c-0l-3sh
Systematic survey of the physical, economic, political-historical, and cultural geography of the continent is followed by regional studies of countries and peoples in Africa, south of the Sahara

GE 256 Geography of East Asia 3c-0l-3sh
Studies China, Japan, Korea, Outer Mongolia, Taiwan. Geographic background for development and wise use and restoration of natural resources are dealt with

GE 257 Geography of South and Southeast Asia 3c-0l-3sh
India, Pakistan, Bangladesh, Sri Lanka, Burma, Thailand, Laos, Cambodia, Vietnam, Malaysia, and Indonesia are studied with special attention to regional similarities and differences, particularly as they pertain to human adjustment.

GE 312 Research in Geography and Planning 3c-0l-3sh
Introduction to the basic elements of research in the context of orderly scientific investigation. Emphasizes the application of research methodology to specific geographic and planning problems.

GE 313 Cartography II 3c-0l-3sh
Prerequisite: GE 213
Gives an understanding of the compilation and use of maps and quantitative data. Develops skills essential to the construction of various types of maps.

GE 314 Map and Photograph Interpretation 3c-0l-3sh
Maps and air photographs, along with remote sensing materials, permit inventory and analysis of geologic, land use, urban development, and other landscape phenomena. The understanding of these materials and associated tools for their use is presented.

GE 331 Population Geography 3c-0l-3sh
Spatial variations in numbers, characteristics, and dynamics of human population, models, and theoretical constructs relevant to demographic structures and processes are studied, as well as major world and regional problems.

GE 332 Urban Geography 3c-0l-3sh
Basic principles of urban geography including site, situation, function, urban land use, urban structure, and urban hierarchy are introduced. Relationships between urban geography and urban planning are explored.

GE 333 Trade and Transportation 3c-0l-3sh
Deals with the spatial aspects of transportation systems and their use. Circulation, accessibility, time and distance concepts, and trade patterns are discussed.

GE 334 Political Geography 3c-0l-3sh
Geographic factors and conditions are analyzed as they relate to the character and function of states. Political institutions are evaluated in light of geographic conditions.

GE 335 Geography of Energy 3c-0l-3sh
Energy production and consumption in human societies through time are considered to provide the background necessary for understanding contemporary problems. Emphasis is on locational and environmental aspects of energy in the United States.

GE 336 Social Geography 3c-0l-3sh
Spatial dimensions of the American society are the focus of this course. The distribution of various social groups and their impact on the landscape are considered.

GE 337 Historical Geography 3c-0l-3sh
Studies of past geographies, geographical change through time, and historical perspectives on the cultural landscape are included. Historical geography of the United States is emphasized.

GE 340 Geography of Fresh Water Resources 3c-0l-3sh
Contributes to the students' understanding of fresh water as a resource. Fresh water is identified by its physical characteristics, by an inventory based on the types of storage within the hydrologic cycle, and by the values assigned to this resource by different cultures. Included in the course are problems relating to the consumptive and withdrawal uses of water, the role of water supply and water law, flooding and floodplain management, the sources of water contamination and pollution, and case studies of selected river basins.

GE 341 Climatology I 3c-0l-3sh
Elements of weather and climate and the climatic regions of the earth are studied in relation to other aspects of the physical and biological environment.

GE 342 Physiography 3c-0l-3sh
Focuses on the study of landforms and water features. Types, distribution, and processes of formation are considered in relationship to the human landscape.

GE 360 Introduction to Planning 3c-0l-3sh
Introduction to field of planning on city, metropolitan, regional, and county levels. Included are intergovernmental context and legislative basis for planning; the comprehensive plan; plan implementation and the planning agency.

GE 361 Planning: Basic Studies and Analysis 3c-0l-3sh
Prerequisite: GE360
Research, analytical design, and plan-making techniques in urban and regional planning. Examines basic items necessary to prepare urban and regional comprehensive plans.

GE 371 Aerospace Workshop 3c-0l-3sh
Develops an appreciation and provides information related to aerospace activities and contributions; offers background for teaching aerospace courses; discusses aviation/space careers; and presents the basic principles of flying (usually including some flight instruction). Offered summer only.

GE 411 Geography: Thought and Philosophy 3c-0l-3sh
Seminar limited to junior and senior majors with at least 12 semester hours in geography. Deals with history of the discipline, great ideas, leading problems, and unresolved issues.

GE 415 Remote Sensing 3c-0l-3sh
Deals with air photographs, satellite imagery, thermal sensing, and radar imagery and their application to deriving information about the earth's physical and cultural landscapes.

GE 416 Computer-Assisted Cartography 3c-0l-3sh
Prerequisites: GE313, or equivalent, or permission of instructor
This course introduces automated cartographic production techniques. Topics include the use of cartographic hardware and software, the distinction between vector and raster representations, data bases, the cartographer-machine interface, and designing computer-generated maps.

GE 431 Geography of American Indians 3c-0l-3sh
Focuses on the historical/cultural geography of Native Americans. Population, resources, land use, development, settlement patterns, and other selected topics are covered.

GE 432 Geography of Crime 3c-0l-3sh
The geographical context of crime is examined from historical and contemporary viewpoints. Relevant concepts and analytical approaches are introduced.

GE 440 Conservation: Environmental Analysis 3c-0l-3sh
Problems of exploitation and utilization of regional resources such as soils, minerals, forests, and wildlife are considered in relation to population growth and regional planning and development.

GE 462 Planning: Developmental Principles and Theory 3c-0l-3sh
Prerequisite: GE360
Examines the process of city planning during ancient, medieval, Renaissance, and modern periods. A review of early planning in America, as well as present city planning, is included.

GE 463 Planning: Design 3c-0l-3sh
Prerequisite: GE360
Presents concepts of city, subdivision, and transportation design in relation to topography, natural resources, and other physical elements.

GE 464 Land Use Policy 3c-0l-3sh
Basic concepts of land use policy at the national, regional, county, and local levels are treated. Analysis is made of various land use policies.

GE 481 Special Topics var-3sh
Topical courses offered on an experimental basis. Check department schedule for these offerings.

GE 493 Internship var-3-12sh
Professional learning experience with emphasis on application of academic background. Open to majors and minors in geography and regional planning with 75 semester hours and 15 semester hours in the department, respectively. See internship supervisor for additional information.

GE 499 Independent Study var-3-6sh
Independent research and study under faculty direction. Interested students should approach department chairperson for information.

GK: Greek
Department of Spanish and Classical Languages
College of Humanities and Social Sciences

GK 151 Greek I 3c-0l-3sh
For beginning students; pronunciation, reading, oral, and written communication are the objectives. In grammar the case system of the Greek noun is begun. All classical Greek courses are offered occasionally through Independent Study; Modern Greek may be available through the Critical Languages program.

GK 152 Greek II 3c-0l-3sh
Continuation of Greek I. In grammar the case system of the Greek noun is completed.

GK 251 Greek III 3c-0l-3sh
Continued training in basic skills, with the possible addition of the study of specific topics; consult the department for topics of interest. In grammar most tenses of the Greek verb are studied.

GK 252 Greek IV 3c-0l-3sh
Continuation of Greek III. In grammar more tenses of the verb are studied. The readings become short selections from Greek literature.

GK 351 Advanced Greek Language I 3c-0l-3sh
Reviews grammar in depth; analyzes the structure of the language. While themes are not required, selections from Greek prose are read both for knowledge of their content and for developing knowledge of the structure of the language.

GK 352 Advanced Greek Language II 3c-0l-3sh
Continuation of GK351. Selections are from poetry this semester.

GK 482 Independent Study var-3sh
An opportunity to engage in an in-depth analysis of some topics dealing with the Greek language and culture through consultation with a faculty member. Permission required.

GM: German
Department of German
College of Humanities and Social Sciences

GM 101 Intensive Elementary German var-6sh
Student completes sequence in one semester (6sh). Using Dartmouth Intensive Language Model (DILM), sections emphasize mastery of spoken language as well as basic language skills. Classes are 45 minutes each, drill sessions are 40 minutes each and meet Monday through Friday.

GM 121 Conversation I 2c-0l-2sh
Two-hours-weekly conversational practice in small groups to improve pronunciation and oral proficiency. Must take concurrently or have had previously GM151 or its equivalent to enroll in the course.

GM 122 Conversation II 2c-0l-2sh
Two-hours-weekly conversational practice in small groups to improve fluency and ability to speak in small-group settings. May enroll without having had GM121 but must be taking concurrently or have had GM151 or its equivalent.

GM 151 German I 3c-0l-3sh
For beginners, the objectives include grammar, pronunciation, reading, speaking, and writing.

GM 152 German II 3c-0l-3sh
For students who have had German I or its equivalent, the objectives are to enhance and develop the four skills of listening, speaking, reading, and writing.

GM 151-2 Accelerated German I and II each 3c-0l-3sh
By attending class six hours each week, the student completes the elementary sequence (6 credits) in one semester. The intensive sections present the same basic language skills that are taught in the regular GM151-152 classes with slightly greater emphasis on the mastery of the spoken language. Majors take 051 and 052 concurrently.

GM 201 Intensive Intermediate German var-6sh
Student completes sequence in one semester (6sh). Using Dartmouth Intensive Language Model (DILM), students develop language skills with emphasis on oral competency. Classes are 45 minutes each; drill sessions are 40 minutes each and meet Monday through Friday.

GM 221 Conversation III 2c-0l-2sh
Two-hours-weekly conversation practice in small groups emphasizing the use of greetings, idiomatic expressions, and communication skills to improve vocabulary and pronunciation.

GM 222 Conversation IV 2c-0l-2sh
Two hours of weekly conversation designed as a continuation of the practice in small groups, focusing on speaking and listening skills and on participation in discussions and dialogues. May enroll without having taken GM221.

GM 251 German III 3c-0l-3sh
Continued training in basic skills, with the possible addition of the study of specific topics; consult the department for topics of interest.

GM 252 German IV 3c-0l-3sh
Continuation of German III with some emphasis on literary works.

GM 251-2 Accelerated German III and IV each 3c-0l-3sh
By attending class six hours each week, the student completes the intermediate sequence (6 credits) in one semester. The intensive sections continue to develop basic language skills with a slightly greater emphasis upon the mastery of the spoken language. Majors take 221-222 (or 121-122) concurrently.

GM 253 Intermediate Composition and Conversation 3c-0l-3sh
Can be taken instead of or in addition to 252. Designed for majors or serious students. Offered in spring only.

GM 254 Business German 3c-0l-3sh
Prerequisite: GM251 or equivalent.
A one-semester course which can be taken instead of, or in addition to, GM252 by students interested in business or as part of the General Education requirement (equivalent to German IV). Business practices and specialized business vocabulary, letter writing, and problems of translation are emphasized.

GM 256 Scientific German 3c-0l-3sh
Designed to substitute for GM252; course will be offered in the second semester. Primarily for science majors, it may be taken as an elective by German majors.

GM 321-322 Advanced Conversation I and II each 2c-0l-1sh
Designed to increase speaking ability. The variety of content permits repetitions of these relatively informal courses.

GM 351 Advanced German Language I 3c-0l-3sh
Aims to review and expand the student's grammatical skills, to apply these skills to extensive cultural and short literary readings, and to produce frequent themes on these readings.

GM 352 Advanced German Language II 3c-0l-3sh
Continues to expand the student's grammatical skills and to apply them by the writing of longer themes based on cultural and literary readings.

GM 361 Development of German Culture and Literature I 3c-0l-3sh
Designed to provide a background in German literature, music, art, architecture, and history. Surveys the period from the migrations of the Germanic tribes to the rise of Prussia as a European power.

GM 362 Development of German Culture and Literature II 3c-0l-3sh
A continuation of GM361. Covers the period from the French Revolution and its effects on Germany up to the present, with an emphasis on German literature, history, and music.

GM 363 Introduction to German Literature I 3c-0l-3sh
Selected readings in German poetry to acquaint the student with formal and thematic aspects of German verse from the Middle Ages to the present.

GM 364 Introduction to German Literature II 3c-0l-3sh
Selected readings in German fiction and drama to acquaint the student with representative works and techniques of interpretation.

GM 367 Nineteenth-Century German Literature 3c-0l-3sh
A survey of the major works of German poetry and prose with an emphasis on the literary movements of Romanticism, Realism, and Naturalism.

GM 368 Twentieth-Century German Literature 3c-0l-3sh
A study of representative works of German poetry and prose from Expressionism through World War II.

GM 369 Contemporary German Literature 3c-0l-3sh
A study of the literary achievement of postwar Germany up to the present.

GM 370 The Age of Goethe I 3c-0l-3sh
A study of representative works from the Enlightenment and Storm and Stress periods.

GM 371 The Age of Goethe II 3c-0l-3sh
A study of selected works of German Classicism with an emphasis on the prose and poetry of the first decades of the 19th century.

GM 410 History of the German Language 3c-0l-3sh
History and development of German Language, with special emphasis on relationships with English. Analysis of annals in Gothic, Old High German, and Middle High German using methods of historical and contemporary linguistics.

GM 481 Special Topic var-1-3sh
Designed to meet the special needs of a student group.

GM 482 Independent Study var-1-3sh
An opportunity to engage in an in-depth analysis of some topic dealing with the German language and culture through consultation with a faculty member. Permission required.

GM 493 Internship in Germany var-3-12sh
Prerequisites: 12 credits in 300- or 400-level courses and a minimum of one semester study in Germany.
A supervised field experience in Germany with approved public agencies and institutions or private firms; no longer than one semester and no less than one month. Positions will be matched as closely as possible with the intern's personal interests and degree of proficiency in the German language. Academic work at the Gesamthochschule in Duisburg must precede the internship. Open to students in other disciplines, such as Political Science, International Relations, Business, etc., with adviser approval.

GN: Gerontology
Allied Health Professions Program
College of Health and Human Services

GN 481 Special Topics var-1-3sh
Focuses on special topics in gerontology which are not included in regular course offerings.

GN 493 Internship 3sh
Prerequisites: Senior standing, all required courses.
Supervised experience in public or private agency that serves aging clients.

GS: Geoscience
Department of Geoscience
College of Natural Sciences and Mathematics

GS 101 Earth Science: Geology and Oceanography 3c-0l-3sh
A nonmathematical treatment of introductory oceanography and geology designed specifically for nonscience majors.

GS 102 Earth Science: Geology and Oceanography Lab 0c-2l-1sh
Should be taken concurrently with GS101.
Lab experiences in various aspects of oceanography and geology. Includes field trip(s).

GS 103 Earth Science: Meteorology and Astronomy 3c-0l-3sh
No prerequisite.
The earth's upper environment is studied by focusing on the effects of the atmosphere and the earth's place in the universe on the daily lives of humankind.

GS 104 Earth Science: Meteorology and Astronomy Lab 0c-2l-1sh
Should be taken concurrently with GS103.
Use of the weather station and the planetarium highlight the series of exercises designed to aid students in developing meaningful concepts about their ability to understand and, in the future, control their place in the universe.

GS 110 General Astronomy 3c-0l-3sh
Specifically designed to introduce students to discipline of astronomy; emphasis placed on study of time and the seasons, planets, moon, sun, space flight, and constellations. Two night observations will be scheduled, weather permitting.

GS 121 Physical Geology 3c-0l-3sh
Introduction to science of the earth: physical properties and processes of the earth's interior and crust and their interaction with surface processes which shape and modify the physical environment.

GS 122 Physical Geology Laboratory 0c-2l-1sh
Should be taken concurrently with GS121.
Identification of common rocks and minerals; introduction to geologic landforms and structures; analysis of the effects of geologic processes on the environment. Includes field trips.

GS 123 Intensive Physical Geology Laboratory 0c-3l-1sh
Should be taken concurrently with GS121 by all Geology/Geoscience majors/minors.
Selected problems in rock and mineral identification, topographic and geologic mapping techniques, and geomorphology. Designed to prepare students for upper-level geology classes. Includes field trips.

GS 131 Historical Geology 3c-0l-3sh
Prerequisite: GS121 or permission of the instructor.
Introduction to the history of the earth and the record of physical and biologic evolution.

GS 132 Historical Geology Laboratory 0c-3l-1sh
Should be taken concurrently with GS131.
Use of geologic map interpretation, fossil identification, and stratigraphic rock sequences to solve problems in earth history. Includes field trips.

GS 133 Intensive Historical Geology Laboratory 0c-3l-1sh
Should be taken concurrently with GS131 by all Geology/Geoscience majors/minors.
Selected problems in stratigraphic analysis, paleontology, and structural geology, designed to prepare students for upper-level geology classes. Includes field trips.

GS 141 Introduction to Ocean Science 3c-0l-3sh
Introduction to physical, chemical, biological, and geological processes in oceanography and the interactions among them. Impact of exploitation of the oceans, coastal areas, marine, physical, and living resources on the environment and on humankind. Includes field trips which may involve a fee and may occur on weekends.

GS 150 Geology of National Parks 3c-0l-3sh
A study of geological processes and earth history as documented by the classical geological features of U.S. and Canadian national parks. Includes Badlands, Glacier, Grand Canyon, Great Smokies, Gros Morne, Mammoth Cave, Yellowstone, Yosemite, and others. Not open to Geoscience majors or minors.

GS 151 The Age of Dinosaurs 3c-0l-3sh
A thorough introduction to dinosaurs and the world they inhabited. Topics include the most current theories regarding dinosaurian biology (behavior, metabolism, evolution), ecology (greenhouse climate, associated plants and animals), and extinction (asteroid impact, volcanism, climate change). Not open to Geoscience majors and minors.

GS 221 Physical Resources of the Earth 3c-0l-3sh
Introduction to mineral, energy, and water resources of the earth, genesis of ore depositions, exploration, exploitation, and utilization of resources; impact of exploitation of resources on the environment and on humankind. Includes field trips which may occur on weekends.

GS 310 Environmental Geology 2c-3l-3sh
Prerequisite: 8sh in geology or permission.
The application of geologic information to the accommodation and reduction of natural hazards, to land-use planning, and to the utilization of earth materials. Includes field trips which occur on weekends.

GS 321 Mineralogy 2c-3l-3sh
Prerequisite: GS121 or CH111.
Concerned with properties of minerals; introduction to crystallography and chemistry of crystals, followed by a determination of minerals and their probable genesis. Includes field trips which may occur on weekends.

GS 322 Igneous and Metamorphic Petrology 2c-3l-3sh
Prerequisite: GS321.
Concerned with a description of igneous and metamorphic rock character

based upon mineral components and physical relationship between mineral components of a rock. Includes field trips which may occur on weekends.

GS 325 Structural Geology 2e-3l-3sh
Prerequisites: GS131 and GS132/133 or permission of instructor.
Study of primary structures, contacts, rock mechanics, joints, faults, folds, foliation, and lineation. Includes work with geologic maps and structure sections. Brunton compass, orthographic and stereographic projections. Includes field trips which may occur on weekends.

GS 326 Field Geology 2e-3l-3sh
Prerequisite: GS325.
Principles and techniques of field geology with emphasis on developing field skills using Brunton compass, aerial photographs, topographic maps, altimeter, Jacob staff, and rock color charts. Field projects involve techniques of field note-taking, measuring and describing stratigraphic sections, geologic field mapping and analysis, construction of geologic maps and structure sections, and report writing. Includes field trips which may occur on weekends.

GS 330 Paleontology 2e-3l-3sh
Prerequisite: GS131 or permission of instructor.
Study of the morphology, evolution, geologic significance, and paleoecology of fossil organisms. Includes field trips which may occur on weekends.

GS 331 Hydrogeology 2e-3l-3sh
Prerequisites: MA121-122, GS121-122/123, or permission.
An overview of groundwater geology, including flow equations, graphical solutions to flow problems, and computer modeling of flow systems, as well as the geotechnical and social implications of groundwater utilization. Includes field trips which occur on weekends.

GS 332 Geochemistry 2e-3l-3sh
Prerequisite: CH111-112, GS121-122/123, or permission.
Introduction to low-temperature chemistry of the earth's surface and near-surface; includes discussions of chemical activity, solution chemistry, organic geochemistry, trace elements, isotopes, and the chemistry of natural waters.

GS 336 Geology of the Northern Rockies var-3sh
Prerequisite: Permission of instructor.
A field study of the major geologic features and relationships involved in the development of the northern Rocky Mountains. National Park and Monument areas of South Dakota, Wyoming, and Montana are included among the areas investigated. (3 weeks, summer only.)

GS 338 Geology of the American Southwest var-3sh
Prerequisite: Permission of instructor.
A field study of the major geologic features and relationships exposed in the American Southwest, including the Colorado Plateau, the Rio Grande Rift, Death Valley, and parts of the Southern Rocky Mountains. (3 weeks, summer only.)

GS 341 Solar System 2e-3l-3sh
Prerequisites: MA121 and PY111.
Fundamentals of astronomy, with emphasis on observational methods, mechanics, and origin of the solar system and spatial relationship of the solar system to the other members of the universe.

GS 342 Stellar Astronomy 2e-3l-3sh
Prerequisites: MA121 and PY111.
Fundamentals of astronomy, with emphasis on sun, stars, galaxies, the sidereal universe, and use of spectroscopy for gathering astronomical data.

GS 350 Operation of the Planetarium var-1sh
Prerequisites: GS110, GS341, GS342, or permission of instructor.
Designed to acquaint the student with methods of operation and repair of a Spitz A-3-P planetarium. Content includes topics suitable for lectures to various age groups. Student will write and present a demonstration program. Meets once a week with occasional evening observations.

GS 361 Physical Oceanography 2e-3l-3sh
Prerequisites: PY111 and MA121 or permission of instructor.
Introduction to physical, chemical, geological, and biological nature of ocean: topography, submarine geology, and bottom deposits. Includes field trip(s) which may occur on weekend(s).

GS 362 Plate Tectonics 2e-3l-3sh
Prerequisites: PY111-112 and a minimum of 20sh of geology.
Introduction to formal theory of plate tectonics. Topics include magnetic anomalies, first motion studies, thermal structures of the plates, kinematics, crustal generation, sea floor spreading, collision, and subduction deformation. Prior to 1988 was titled Marine Geology and Plate Tectonics.

GS 371 Meteorology I 2e-3l-3sh
Prerequisite: One year of Physical Science or Physics.
Introduction to meteorological sciences; composition and structure of the atmosphere; radiation principles; elementary thermodynamics and heat balance.

GS 411 Sedimentary Petrology 2e-3l-3sh
Prerequisite: GS321 or permission of instructor.
Study of sediments and sedimentary rocks with emphasis on interpreting ancient environments of deposition utilizing sieve analysis, hand lens, and petrographic microscope. Includes field trips which may occur on weekends.

GS 412 Stratigraphy 2e-3l-3sh
Prerequisite: GS411 or permission of instructor.
Principles and processes involved in development and description of stratified rock sequences, principles and problems of correlation, and selected stratigraphic problems. Includes field trips which may occur on weekends.

GS 432 Coal Geology var-1-3sh
Prerequisite: 8sh in geology or permission of instructor.
An introduction to the geology of coal, its occurrence, origin, organic and inorganic constituents, environments of deposition, coal mining, and a detailed description of coal stratigraphy in the eastern and central United States. Includes field trips which may occur on weekends.

GS 440 Subsurface Geology 2e-3l-3sh
Prerequisite: Minimum 20 credit hours of Geology.
An introduction to the geology of petroleum, its origin, migration, entrapment, and production. Lab is designed to provide practical experience in subsurface mapping techniques and the use and evaluation of geophysical logging devices. Includes field trips which may occur on weekends.

GS 480 Geoscience Seminar var-1sh
For seniors majoring in some aspect of geoscience. The seminar (1) provides the student with an opportunity to prepare, formally present, and defend a scientific paper based either on his/her own research or on a topic chosen with the approval of instructor and (2) provides opportunity to discuss topics presented by other students, faculty, or guests.

GS 481 Special Topics var-1-3sh
Prerequisite: Permission of instructor.
It is the department's intention to use this course to schedule extended field trips and for teaching special courses which will utilize the specialties of the geoscience faculty.

GS 482 Independent Study var-1-3sh
Independent study provides the student with an opportunity to use library, laboratory, or field research in an area which is of interest under the supervision of a designated faculty member.

GS 493 Internship var-1-3sh
Summer work experiences with cooperating firms or agencies. May be scheduled only after consultation with adviser and chairperson. Restricted to junior and senior department majors.

HE: Home Economics Education
Department of Human Development and Environmental Studies
College of Health and Human Services

HE 218 Child Development 3c-0l-3sh
Prerequisite: PC101.
Focuses on the normal development and behavior of children. Survey made of physical, emotional, social, and intellectual development of children from conception through early adolescence. Pertinent child development research analyzed.

HE 220 Teaching in Child Development Centers 2c-4l-4sh
Prerequisite: HE218 or equivalent
Techniques in planning for and teaching preschool children. Participation as teacher-assistant provides experience in applying principles of child guidance and development needed by teachers in preschool centers or secondary school child development laboratories.

HE 224 Marriage and Family Relations 3c-0l-3sh
Prerequisite: PC101
Focuses on principles of human relations basic to marital decisions and adjustment. Influence of community and family experiences on personal development and adjustment explored.

HE 250 Introduction to Teaching Vocational Home Economics Education 3c-0l-3sh
Overview of philosophy and organization of home economics profession and the role of home economics teachers. Opportunities for planned observations and varied teaching experiences using a variety of resource materials are provided. Self-evaluation relative to desirable teacher competencies is stressed.

HE 317 Infant Development 2c-2l-3sh
Prerequisite: HE218
Study of characteristic developmental changes of human infants from birth to approximately two and a half years. Participation as teacher assistant in infant/toddler child care center provides experience in developmentally appropriate guidance and planning for very young children.

HE 321 Preschool Education 3c-0l-3sh
Prerequisite: HE220 or concurrently
Examination of the child development philosophy as the basis for developmentally appropriate decisions and methods in preschool education programming. Emphasis is placed on play as a developmental process and as the major aspect of the preschool curriculum. May not be interchanged with EL353: Preschool Education.

HE 324 Family Dynamics 3c-0l-3sh
Prerequisite: HE224 or equivalent
Emphasis on processes and models of family development topics. Focus on approaches and dynamics of principles related to familial and marital adjustment and coping.

HE 350 Teaching Family Life Education 3c-0l-3sh
Prerequisites: HE250, ED242
Corequisite: EP302
Emphasis on teaching family life education in home economics classrooms and through community organizations and agencies. Lessons are planned and implemented using a variety of instructional methods incorporating adaptations and modifications for special needs learners, basic skills, global concerns, and use of a problem-solving/decision-making approach. Planning of content, learning activities, instructional materials, and evaluation based on clearly stated objectives is emphasized. A microcomputer spreadsheet is utilized to manage a department budget and a gradebook. Participation in professional organization activities is expected.

HE 418 Advanced Child Development 3c-0l-3sh
Prerequisite: HE218
Study of trends and research in the field of child development based on a review of major theorists and current literature.

HE 420 Practicum in Child Development 1c-10l-6sh
Prerequisites: Senior standing and HE220 and HE321
The intensive practicum provides in-depth practical advanced laboratory experiences designed to refine and further develop the techniques and skills needed by professionals to work with young children and families.

HE 422 Early Childhood Education 3c-0l-3sh
Prerequisite: HE220 or concurrently
Current educational theories and research reviewed in terms of implication for preschool and their effect on material, equipment, and activity selection.

HE 424 Family Issues 3c-0l-3sh
Prerequisite: HE224
Concentrated study of selected areas of family life, with emphasis on current personal and social issues affecting the family.

HE 426 Techniques of Parent Education 3c-0l-3sh
Prerequisite: HE220 or equivalent
Examination of nature, extent, and significance of parent education. Interrelationships of home, school, and community agencies are examined in light of various programs, methods, and techniques of parenting education.

HE 427 Administration of Child Development Centers 3c-0l-3sh
Prerequisites: HE220 or equivalent, juniors or seniors only
Development of special knowledge and competencies needed by successful administrators of child care programs including proposal writing, budgeting, management, staff selection and training, appropriate curriculum materials, philosophy, parent involvement, child advocacy, and program evaluation.

HE 430 Student Teaching Practicum 1c-0l-1sh
Taken concurrently with ED431 and ED441. Assists student teachers in analyzing problems and experiences encountered during student teaching. Emphasizes the variety and types of home economics programs and focuses on developing effective teaching strategies (four sessions of three and a half hours during the semester).

HE 450 Teaching Vocational Home Economics 3c-0l-3sh
Prerequisite: HE350
Emphasis is on teaching vocational home economics in consumer/homemaking and occupational home economics programs. Federal legislation impacting on home economics is analyzed for use in program decisions. Emphasis is given to program development using CBVE model, development of individual learning packets, vocational youth organizations, advisory committees, home economics and vocational educational priorities, professional organizations, proposal development for funding, impact on public policy, marketing home economics, and development of a personal philosophy of homes economics education.

HE 455 Home Economics Programs for Individuals with Special Needs 3c-0l-3sh
Prerequisite: EX300
Application of vocational regulations and public laws in relation to individuals with special needs. Developing home economics programs (planning, methods, strategies, and resources) for individuals with special needs applicable to school and nonschool settings.

HE 457 Microcomputers in Human Ecology 3c-0l-3sh
Prerequisite: Junior-level standing in College of Health and Human Services
Use of the microcomputer in human ecology. Commercial software is utilized for word processing, spreadsheet, and data base applications. Software for specific applications is explored. Copyright laws, care of a microcomputer system, telecommunications, and the impact of computers in the home and industry are studied.

HE 463 Family and the Community 3c-0l-3sh
Study of community agencies and problems that affect families and their contributions to community. Investigation of ways group dynamics, communication media, and other resources aid understanding of human behaviors. Field experience is an integral part of the course.

HE 482 Independent Study var-1-3sh
Upper-level students with high scholastic achievement pursue their particular interests outside the realm of the organized home economics education curriculum. May be taken more than once to a maximum of 3 semester hours. Approval of department required.

HE 493 Internship var-6-12sh
Prerequisites: Permission of department, college dean, and university internship coordinator; upper-level standing
Practical experience related to the student's major area of study. Objectives are developed individually in consultation with university faculty member who supervises the internship. Log and major paper required. May be repeated up to a total of 12 semester hours; however, these semester hours are not applicable toward the 124 semester hours required for graduation if student receives 12 semester hours in student teaching.

HI: History
Department of History
College of Humanities and Social Sciences

HI 195 The Modern Era 3c-0l-3sh
Interprets the development of two centers of civilization, Europe and America,

within a global context, and extends from at least the Age of Enlightenment through the present.

HI 200 Introduction to History 3c-0l-3sh
For history majors and concentrates. Topics include philosophy of history, important schools of history and historians, and methods of historical research. Student is encouraged to become a better historian and to identify with historical profession.

HI 201 Western Civilization Before 1600 3c-0l-3sh
Survey course presenting in various forms the origin and development of major political, social, religious, and intellectual institutions in Western Civilization to approximately 1600. For History majors or by instructor's permission.

HI 202 Western Civilization Since 1600 3c-0l-3sh
Development of Western civilization from the expansion of Europe to the present, including political, diplomatic, economic, social, and cultural areas. Introduces issues and interpretations encountered in upper-level courses. For History majors or by instructor's permission.

HI 203 United States History for Historians 3c-0l-3sh
Introduces aspiring historians to United States history since 1763. Emphasizes the issues, methods, and problems that currently concern professional historians. For History majors or by instructor's permission.

HI 210 Ancient Civilization: The Middle East and the Eastern Mediterranean 3c-0l-3sh
An examination of the development and the spread of ancient civilization in ancient Middle East and the Eastern Mediterranean. Topics of study will include the characteristics of civilization and the development of political, social, economic, and cultural institutions in the river valley centers and the diffusion to the fringe areas.

HI 212 Ancient and Medieval Europe 3c-0l-3sh
An examination of the development of civilization in Europe during the ancient and medieval periods. The course will focus on the Ancient Greek and Roman civilizations and the medieval European civilization. The characteristics and institutions of civilization will be stressed as well as the political history.

HI 214 Themes in American History 3c-0l-3sh
Prerequisite: HI195
Open only to non-History majors. Designed to give students an appreciation of the basic themes and issues in the making of American society. Students will examine themes such as the fruition of democracy, the American dream, slavery and freedom, the tensions between liberty and order, and the role of the United States in a world setting.

HI 301 History of Ancient Greece 3c-0l-3sh
Will analyze major political, social, and economic developments in ancient Greek civilization from Bronze Age to death of Alexander.

HI 302 History of Ancient Rome 3c-0l-3sh
Will trace Roman history from early Republic down to fall of Empire. Roman political theory will be particularly emphasized.

HI 303 Medieval Europe I, 400-1000 3c-0l-3sh
History of early Medieval Europe, from decline of Rome to beginnings of High Middle Ages, emphasis on political, social, economic, religious, and intellectual developments.

HI 304 Medieval Europe II, 1000-1300 3c-0l-3sh
History of late Medieval Europe, from High Middle Ages to Renaissance period; emphasis on political, social, economic, religious, and intellectual developments.

HI 305 Renaissance and Reformation 3c-0l-3sh
History of Europe from c. 1250; rise of commercial city, kings, and pressures on Christian Church to 1600. Some consideration of technology and voyages.

HI 306 Early Modern Europe 3c-0l-3sh
Greatness of France under Louis XIV; Sweden; Thirty Years' War. Emergence of modern society; French Revolution.

HI 307 History of Europe: 1815-1914 3c-0l-3sh
Study of Europe in 19th century, with emphasis on the emergence of major thought patterns, Romanticism, Nationalism, Socialism, and Positivism.

HI 308 Twentieth-Century Europe 3c-0l-3sh
Political, economic, and diplomatic trends in Europe since 1900, with major emphasis on causes and results of war and search for security.

HI 311 Rise and Fall of Hitler's Empire 3c-0l-3sh
In-depth study of Hitler and the Nazi order; offers an analysis of 19th-century origins of Nazi ideology and intensively analyzes domestic and foreign totalitarian policy (1920-1945), including Holocaust, Resistance, and the postwar Nuremberg Trials.

HI 320 History of England to 1688 3c-0l-3sh
Survey of the growth of the English nation, with emphasis on political, social, and economic developments leading to 17th-century conflict between Crown and Parliament.

HI 321 History of England, 1688 to Present 3c-0l-3sh
Survey of the growth of England as a democratic constitutional monarchy. Attention directed to industrial revolution and to imperial expansion and England's role in 20th-century world. Attention given to social and cultural history.

HI 322 French Revolution and Napoleon 3c-0l-3sh
Brief sketch of Old Regime, concentration on Revolution and Empire, with emphasis on politics, social structure, diplomacy, and economics.

HI 324 History of Germany to 1848 3c-0l-3sh
Study of the development of Germany politically and culturally from ancient times, emphasizing medieval and early modern periods to 1849.

HI 325 History of Germany: 1849 to the Present 3c-0l-3sh
Study of the political and cultural development of modern Germany from the Revolution of 1848, including imperial, republican, and totalitarian phases, to post-World War II East and West Germany.

HI 326 History of Russia 3c-0l-3sh
General survey of Russian history, culture, and institutions. Special consideration given to study of historical forces formative of Revolution of 1917.

HI 327 History of Soviet Russia 3c-0l-3sh
General survey of contemporary Soviet history, culture, and institutions. Special consideration is given to the study of communist theory and its place in current Russian historiography.

HI 330 History of the Islamic Civilization 3c-0l-3sh
An approach to learning about a non-Western culture: Muhammad, Arabs, and Muslims as creators of a great civilization from rise of Islam to 1800; emphasis on cultural institutions of Islam and their interrelationships within Middle East.

HI 331 Modern Middle East 3c-0l-3sh
Survey of changes that have taken place in Middle East and in Islam since 18th century and of contemporary problems in that region.

HI 340 Colonial America 3c-0l-3sh
Survey of original thirteen states from their inception as colonies within the British empire to 1763, the eve of Independence. Attention is given to their political development; economic position within the empire; relations with Indians; and evolution of social, educational, and religious life.

HI 341 American Revolution 3c-0l-3sh
An examination of Whig-Tory participants of American Revolution. Examines events from 1763 to 1783. Changing interpretations of the causes and effects of the revolution will be discussed.

HI 342 The Early Republic 3c-0l-3sh
Survey of United States history from 1783 to 1850, with special attention on constitutional, political, economic, and social trends.

HI 343 Civil War and Reconstruction 3c-0l-3sh
Study of the failure of American democracy to cope with issues of mid-19th

century, followed by political, economic, military, and social developments during war and reconciliation of North and South.

HI 345 The Age of Ragtime: American History, 1900-1929 3c-0l-3sh
Using the nation's cultural development as its thematic foundation, this course analyzes the transitional character of thProgressive Era, World War I, and the 1920s.

HI 346 Recent United States History 3c-0l-3sh
Study of political, economic, and cultural changes in American life since 1929; examines roots of social problems facing us today. Some recent foreign policy trends also studied.

HI 350 History of Latin America Colonial Period, 1450-1820 3c-0l-3sh
Study of life of people, Indian cultures, conquest by Spaniards and Portuguese, government during Colonial Period, and Wars of Independence.

HI 351 History of Latin America: National Period, 1820-Present 3c-0l-3sh
Study of the history of nations which have emerged since independence, emphasis on economic, political, cultural, and social developments of these nations, as well as relationships of these nations to others in the hemisphere.

HI 360 History of Pennsylvania 3c-0l-3sh
Emphasizes the cultural, economic, political, and social development of our state in its various periods from colonial to today. Special attention given to diversity of Pennsylvania's people, their institutions and problems.

HI 361 History of American Diplomacy, 1775-1900 3c-0l-3sh
Traces foreign relations of the United States from Independence to emergence as a world power. Topics concentrate on themes of commercial relations, political isolation, expansion, and debate over imperialism.

HI 362 History of American Diplomacy, 1900-present 3c-0l-3sh
Treats primarily our 20th-century involvement in world affairs and domestic debate over that involvement. Special emphasis will be placed on the role of interest groups and increasing power of Executive Department over foreign affairs.

HI 363 Thought and Culture in Early America 3c-0l-3sh
Selected topics in early American intellectual and cultural growth, with emphasis onPuritanism, Enlightenment, cultural nationalism, and Romantic movement.

HI 364 Thought and Culture in Modern America 3c-0l-3sh
Selected treatment of historical development of modern American movements in social and political thought, religion, philosophy, fine arts, and literature.

HI 365 History of Black America since Emancipation 3c-0l-3sh
Description and analysis of the role of blacks in the history of the United States since the Civil War, emphasis on key leaders, major organizations, leading movements, and crucial ideologies of blacks in modern America.

HI 366 African-American Women 3c-0l-3sh
Major economic, social, and political issues which have affected black women since their introduction into North America to the present.

HI 367 Native American History 3c-0l-3sh
An unfamiliar perspective on a familiar tale. This course presents the "new Indian History"—North America from Native American materials and points of view. Identification, analysis, and synthesis of Indian realities and options over time are at the heart of this course.

HI 369 Women in America 3c-0l-3sh
A study of the activities of women from the colonial era to the modern era—evaluating cultural, societal, religious, economic, and political frameworks. Reviews women's involvement in movements for feminism, social reform, unionism, and the abolition of slavery.

HI 370 Religion in America 3c-0l-3sh
A history of religious belief and practice in the United States from the colonial period to the present, with an emphasis on the last one hundred years.

HI 372 History of the Early American Working Class 3c-0l-3sh
Description and analysis of the nature and significance of the working class of the United States in the 18th and 19th centuries. The work settings and communities of workers will be examined as well as unions such as the National Labor Union and the Knights of Labor.

HI 373 History of the Modern American Working Class 3c-0l-3sh
Description and analysis of the nature and significance of the working class of the United States in the 20th century. Work settings and strikes will be examined and analyzed as well as unions such as the United Mine Workers and the United Auto Workers and labor leaders including Samuel Gompers, John L. Lewis, and George Meany.

HI 374 History of Organized Crime 3c-0l-3sh
This course studies the relationship between urban, entrepreneurial crime and the evolution of industrial America.

HI 390 History of Women—World Cultures 3c-0l-3sh
Explores religious, legal, political, economic, and mythic dimensions of women in society from ancient to modern times, including Western and non-Western experiences.

HI 391 Film as History 3c-0l-3sh
Particularly concerned with probing the relationship between cinema and society. History of film is explored and student is given some background in film interpretation and cinematography; the western, science fiction, police films, and great foreign and American detective films.

HI 392 Crimes and Punishments in History 3c-0l-3sh
Explores how historical methodology is applied to crimes; how the historical settings have influenced the commission of crimes; the nature and extent of punishment for crimes on individual, societal, and governmental levels.

HI 480 Senior Seminar 3c-0l-3sh
A regimen of research resulting in a written paper. Students work on a program selected by the instructor. For History majors or by instructor's permission.

HI 481 Special Studies in History var-1-3sh
Each semester, courses are offered in interest areas that are not part of the regular program. Some examples of courses of this type are the Victorian Age, the History of Love, World War II, the Great Depression, the Adams Chronicles, and the History of New York City. Students may schedule as many of these courses as desired, but two per semester is the usual limit.

HI 482 Independent Study var-3-6sh
Prerequisites: 12sh in history; a 3.0 history average; permission of a faculty member.
Involves directed reading or research for qualified students. Experimental projects and personalized learning are encouraged. Honors sections are provided for qualified students.

HI 483 Independent Study 3c-0l-3sh
An honors program within the independent study format. Minimum qualifications are a 3.0 QPA, 15sh of history, and a 3.2 average in history classes. Satisfactory honors work is rewarded by formal recognition at graduation.

HI 493 Internship var-3-12sh
With departmental approval, students are attached to local or national government or private agencies doing directive, bibliographical, archival, or museum work. Advising professor meets with intern regularly and determines what papers or reports will be required.

HP: Health and Physical Education
Department of Health and Physical Education
College of Health and Human Services

HP 101 Personal Health and Wellness 2c-0l-2sh
Understanding scientific approach to personal health and wellness; this course emphasizes the positive aspects of health, benefits of good health behaviors, and the use of health resources. The focus is on the components of healthy lifestyles. Open only to students completing General Education requirements. Course offering will not be guaranteed after Spring, 1991.

HP 110 Beginning Swimming 0c-2l-1sh
Fundamentals and techniques of swimming, fitness, and aquatic safety. Designed to meet the needs of the adult nonswimmer.

HP 113 Archery-Intermediate Swimming 0c-2l-1sh
Fundamentals and techniques of archery and swimming.

HP 116 Badminton-Volleyball 0c-2l-1sh
Fundamentals and techniques of badminton and volleyball.

HP 117 Fitness-Swimming 0c-2l-1sh
Fundamentals and techniques of swimming and fitness.

HP 119 Golf-Bowling 0c-2l-1sh
Fundamentals and techniques of golf and bowling.

HP 122 Contemporary (Modern) Dance I 0c-2l-1sh
Fundamentals and techniques of contemporary modern dance.

HP 123 Folk and Square Dance I 0c-2l-1sh
Fundamentals and techniques of folk and square dancing.

HP 124 Fitness Through Dance 0c-2l-1sh
A physical fitness development course for men and women that employs a combination of exercises and dance techniques performed to music. The purpose of the course is to develop a sequential exercise program that allows the student to develop and maintain aerobic fitness, understand body alignment and the principles of exercise, develop correct dance techniques, and plan and develop an individualized and independent continuance program.

HP 125 Basic Tap and Ballroom Dance 0c-2l-1sh
Fundamentals and techniques of basic tap and ballroom dance.

HP 126 Resistive Exercises 0c-2l-1sh
Fundamentals and techniques of progressive resistive exercises.

HP 127 Fencing 0c-2l-1sh
Fundamentals and techniques of fencing.

HP 128 Golf 0c-2l-1sh
Fundamentals and techniques of golf.

HP 129 Badminton-Tennis 0c-2l-1sh
Fundamentals and techniques of badminton and tennis.

HP 133 Folk and Square Dance II 0c-2l-1sh
Fundamentals and techniques of folk and square dance.

HP 134 Bowling 0c-2l-1sh
Fundamentals and techniques of bowling.

HP 137 Gymnastics 0c-2l-1sh
Fundamentals and techniques of gymnastics.

HP 138 Racquetball 0c-2l-1sh
Fundamentals and techniques of racquetball.

HP 140 Health and Wellness, Part A 0c-2l-1.5sh
HP 141 Health and Wellness, Part B 0c-2l-1.5sh
Completing both HP140 and HP 141 (either order) fulfills Liberal Studies Health and Wellness requirement. Together, the two provide an overview of personal health and wellness emphasizing the major components of a healthy lifestyle. Topical areas include, but are not limited to, exercise and fitness, nutrition, smoking, alcohol and substance abuse, and stress and emotional wellness. Students are guided in individualized wellness planning. (Combined as HP143 effective 1992. Offering HP140 and 141 guaranteed only through 1992-1993.)

HP 142 Foundations of Health, Physical Education, and Sport 3c-0l-3sh
Historical, philosophical, and psychosocial foundations of health and physical education are introduced. Specific emphasis is given to scientific theories and principles in such areas as health promotion and behavioral change, exercise physiology, motor development, kinesiology, and motor learning.

HP 143 Health and Wellness 3c-0l-3sh
Introduces the student to the major components of wellness: contemporary nutrition issues as they relate to personal food choices, physical fitness, stress management, sexually transmitted diseases, AIDS, and substance abuse. Completion of HP143 fulfills the Liberal Studies Health and Wellness requirement.

HP 145 Tennis 0c-2l-1sh
Fundamentals and techniques of tennis.

HP 146 Contemporary Dance II 0c-2l-1sh
Fundamentals and techniques of contemporary dance.

HP 147 Tennis-Fencing 0c-2l-1sh
Fundamentals and techniques of tennis and fencing.

HP 150-151 Adapted Physical Education I-II 0c-var1-1sh
Prerequisite: Special permission must be obtained from the department chair to register.
Physical activity classes designed to accommodate students with special needs. Such activity programs are intended to permit specific individuals with medical restrictions to participate in activities which have a strong fitness component as well as a recreational and therapeutic component. All activity is subject to approval of the student's personal physician.

HP 160 Downhill Skiing 1sh
The cognitives and skills necessary for beginning downhill skiing.

HP 161 Basic Rock Climbing 0c-2l-1sh
Fundamentals and techniques of rock climbing.

HP 162 Scuba Diving 0c-2l-1sh
Designed to teach necessary skills and proper use of equipment for underwater swimming. Tanks, regulators, weights, and special equipment furnished. Student must purchase a mask, fins, and snorkel (approximately $15). Includes theory as well as practical work.

HP 163 Backpacking 0c-2l-1sh
Fundamentals and techniques of backpacking.

HP 165 Lifeguarding 0c-2l-1sh
Prerequisites: Departmental consent and Advanced Swimmer.
Designed for professional lifeguards. Includes lifeguarding techniques for pools and fresh and saltwater beaches. Red Cross certification (Pittsburgh Division) granted upon satisfactory completion of course requirements.

HP 166 Basic Smallcraft 0c-2l-1sh
Prerequisite: Intermediate Swimming ability.
Designed to introduce the use of the canoe, paddle board, and sailboat. Emphasis is placed on the development of boating skills, safety rescue, and survival procedures. Red Cross smallcraft certification is granted upon successful completion of the course.

HP 167 Basic Synchronized Swimming 0c-2l-1sh
Prerequisite: Intermediate Swimming ability.
Activity course designed to assist students in the development of beginning synchronized swimming skills. YMCA certification is granted upon successful completion of course requirements.

HP 200 Fundamentals of Physical Activity 1c-2l-1sh
A foundation course designed for the purpose of training in the analysis and performance of the fundamental skills for subsequent motor behavior as they relate to games, sports, and dance. The opportunity to refine powers of observation through principles of efficient and effective movement fundamentals is provided. Individual data profile charts of performance will be completed for future reference.

HP 201 Archery-Badminton-Bowling var-1sh
Skill progressions and analyses, in combination with an opportunity to progress individually in skill competency in each activity. Methods and materials emphasized.

HP 205 Rhythms and Movement var-1sh
Prerequisite: HP200.
Development of basic movement techniques through rhythmic experiences,

knowledge of music notation and terminology, and methods in creative presentation. (Last offered in 1992-1993)

HP 210 Motor Development 2c-0l-2sh
Corequisite: HP200 Fundamentals of Physical Activity
A study of the processes of growth and development and their effects upon human motor behavior across the lifespan. Includes changes during physical growth, maturation and aging, and subsequent effects upon cognitive, perceptual, and physiological performance, both individually and within a sociocultural context.

HP 211 Dance, Rhythmic Activities, and Gymnastics 4c-2l-3sh
Prerequisite: HP200 Fundamentals of Physical Activity
Designed to provide an aesthetic and kinesthetic movement experience which will prepare the student as a teacher of basic movement in a variety of situations. The dance section will include creative movement, rhythms, and square, folk, and contemporary dance. Gymnastics will include basic tumbling, stunts, and apparatus skills.

HP 212 Team Sports 4c-2l-3sh
Prerequisite: HP200 Fundamentals of Physical Activity
Introduces students to the history, current status, and teaching similarities among team sports. Also includes materials and methods unique to each sport.

HP 213 Individual and Dual Sports and Adventure Activities 4c-2l-3sh
Prerequisite: HP200 Fundamentals of Physical Activity
Provides historical and current status of individual and dual sports, as well as adventure activities. Includes skill development, analysis of skilled performance, and strategies for planning and implementing instructional programs.

HP 215 Techniques of Jazz Dance 0c-2l-1sh
A course in jazz techniques applied to jazz music and various jazz dance styles. Movement coordination, style, and rhythm will be emphasized.

HP 218 Ballet I 1c-2l-2sh
An introductory course in classical ballet technique and terminology. The course will focus on how to properly execute basic barre and center technique, placement or "epaulement"—the classical line of the head, torso, arms, and legs; the kinetic coordination necessary for classical ballet; musicality and phrasing of movements; and general orientation to the historical development of ballet and its terminology.

HP 221 Human Structure and Function 3c-0l-3sh
Anatomical organization of the human body, surveyed in sufficient depth to prepare students for physiology, biomechanics, and adaptive physical education.

HP 230 Aerobic Fitness 1c-2l-2sh
An opportunity to participate in a variety of aerobic activities; will aid fitness leaders in developing and implementing several types of aerobic programs; will offer current information on aerobics as preventive medicine.

HP 242 Emergency Health Care 1c-2l-1sh
American Red Cross Standard, Advanced, and Instructor's certification and Multimedia Instructor's certification awarded upon successful completion of this course.

HP 246 Biomechanics 3c-0l-3sh
Prerequisite: HP221
Study of the relationship between mechanical and physical principles and human movement.

HP 250 Motorcycling: Recreation and Safety 1c-0l-1sh
Prerequisites: Ability to ride a bicycle, valid driver's license, motorcycle permit
Two two-hour sessions per week for seven weeks. Using physical fitness as one aspect, the course is designed for those who want instruction in safe and efficient operation of motorcycles from a practical and recreational viewpoint. Summer only.

HP 251 Foundations of Safety and Emergency Health Care 3c-0l-3sh
Focuses on accident prevention, injury control, and first responder's skills. Emphasizes identification of causes of accidents, recommended countermeasures, and mitigation. American Red Cross Certifications are issued in (1) standard first aid, (2) community CPR, (3) instructor of standard first aid, and (4) instructor of community CPR.

HP 252 Introduction to the Driving Task 2c-2l-3sh
Provides an in-depth treatment of operating a motor vehicle competently in all major variations and under most conditions encountered in traffic. A competent operator is one who performs the total driving task knowledgeably and skillfully and demonstrates full understanding and application of identification, prediction, decision, and execution process.

HP 261 Water Safety Instructor 0c-2l-1sh
Prerequisites: Departmental consent and lifesaving certification
Emphasizes the teaching aspect of skills, techniques, and attitudes necessary in all areas of swimming. Students successfully completing course are qualified to hold such positions as waterfront directors, aquatic directors, and other similar positions.

HP 263 Aquatics 0c-2l-1sh
Basic performance techniques in swimming strokes presented with special emphasis on teaching methodology, aquatic sports and games, water safety, skin diving, springboard diving, and other aquatic activities.

HP 264 Advanced Aquatics 0c-2l-1sh
Swimming and rescue skills necessary to complete American Red Cross Senior Lifesaving Course. Emphasis placed upon a broad range of other aquatic experiences and teaching strategies.

HP 268 Water Skiing 0c-2l-1sh
Prerequisite: Intermediate Swimming ability
Water skiing for beginners. Includes use of equipment, ski techniques, and safety. Novice I and Novice II levels of certification of the American Water Ski Association program are available upon successful completion of course requirements. Summer only.

HP 269 Power Boating 0c-2l-1sh
Prerequisite: Intermediate Swimming ability
Introduction to the safe use of small power craft and related equipment for recreational boating activities such as water skiing, fishing, and scuba diving. Includes maintenance, repair, rescue, and survival. Summer only.

HP 270 Instructor of Handicapped Swimming 0c-2l-1sh
Prerequisite: HP261
Concerned with the learning of skills used to teach swimming to exceptional children. All handicaps are considered. This course is important not only in physical education but also for the mentally retarded, rehabilitation education, agency personnel, postgraduate swimming education, YMCA Boys Clubs, community programs, private clubs, and industrial programs. The Red Cross certification Instructor of Swimming for the Handicapped is granted upon successful completion of the course. Summer only.

HP 271 Instructor of Scuba Diving 0c-2l-1sh
Prerequisite: HP262
Prepares instructors to teach skin and scuba diving. Emphasis is placed on teaching methods, use and mechanics of equipment, safety, diving physics and physiology, and advanced diving skills. Instructor of Scuba Diving certificate granted by the Professional Association of Diving Instructors upon successful completion of the course. Summer only.

HP 272 Instructor of Canoeing 0c-2l-1sh
Prerequisite: HP266
Concerned with the learning of skills pertinent to teaching canoeing to beginners. All aspects of canoeing including paddling, repair of equipment, white water canoeing, safety, survival, and teaching techniques are presented. The Red Cross certification Canoeing Instructor is granted upon successful completion of the course. Summer only.

HP 273 Instructor of Sailing 0c-2l-1sh
Prerequisite: HP266
Concerned with learning of skills pertinent to teaching beginning sailing. All aspects of sailing are considered, including the elements of sailing, repair of equipment, racing, safety, and techniques of teaching. Summer only.

HP 274 Instructor of Infants and Preschoolers in Swimming 0c-2l-1sh
Prerequisites: HP261, instructor's consent
Methods course for preparation of swimming instructors in the knowledge and

skills of teaching young children to swim. YMCA certification Instructor of the Very Young granted upon successful completion of course requirements. Summer only.

HP 276 Coaching of Swimming 0c-2l-1sh
Prerequisite: HP261
A lecture-discussion methods course designed to prepare Physical Education majors for coaching of swimming. Emphasis is placed on training methods, officiating, nutrition, scientific principles, and meet strategy. Summer only.

HP 277 Coaching of Synchronized Swimming 1c-2l-2sh
Designed to go beyond the activity nature of Basic Synchronized Swimming (HP267). Students are involved in set design, costumes, selection of music, making props, selecting themes, and organizing a program. Summer only.

HP 279 Swimming Pool Maintenance and Chemistry 2l-0l-2sh
Prerequisite: HP264
A lecture-discussion course designed to teach fundamental water chemistry, filtration, treatment of water problems, winterization of outdoor pools, and pool management. Emphasis is placed on water testing and analysis of chemicals and bacteria. Summer only.

HP 280 Aquatic Facilities Management 2l-0l-2sh
Prerequisite: HP264
An organizational and administrative course designed to prepare the aquatic professional for management of indoor and outdoor facilities. Includes facility design, safety procedures activity, and sport and recreational aspects. Summer only.

HP 300 Folk and Square Dance var-.5sh
Prerequisite: HP205
Skill progressions and analyses, in combination with an opportunity to progress individually in skill competency in each activity. The role of folk and square dance in the physical education programs of all levels is considered. Emphasis on methods and materials.

HP 301 Modern Dance var-.5sh
Prerequisite: HP205
Basic course in dance, introducing the student to experiences in the development of dance as a creative art and an educational medium.

HP 302 Gymnastics var-1sh
Prerequisite: HP205
Fundamental skill progressions and analyses in tumbling and all apparatus areas. Emphasis on individual conditioning and basic skill competency, safety procedures, and teaching techniques. (Last offered in 1992-1993)

HP 314 Advanced Modern Dance 1c-2l-2sh
Prerequisite: Previous dance course or department acceptance of experience
Advanced techniques of performance and choreography. Theory and composition form are integral parts of course content.

HP 317 Basketball Officiating 1c-2l-1sh
Officiating techniques and responsibilities in basketball. Opportunities for officiating experience and qualification for professional ratings.

HP 318 Preprofessional Experience I 3c-0l-1sh
Recommended Prerequisite: HP321
Prerequisite: Physical Education Majors only
Students teach as assistants to a faculty member in two different activities, one in physical education (general education) and one in elementary physical education at the University School. Emphasis on unit development, class management, leadership skills, and evaluation.

HP 319 Preprofessional Experience II var-3sh
Prerequisites: Advanced standing, departmental approval
Students may request an assisting/teaching/leadership assignment in certain university-related areas that may be either instructional or noninstructional in nature. Examples of such professional areas are adaptives, recreation, dance, coaching, aquatics, intramurals, administration, elementary, service or major classes, club activities, and assisting in laboratory or the training room.

HP 321 Methods in Elementary Health and Physical Education 3c-0l-3sh
Prerequisite: Junior standing
Guides the professional student in the development of competencies essential to teaching health and physical education at the elementary school level. Includes theories of instruction in health science, necessity of a safe and healthful school environment, and judicious utilization of school and community health resources and service, as well as study of theories of and movement relevant to elementary school children. Observation, materials, methods of teaching, and opportunities for intern teaching provided.

HP 322 Dance Production 3c-0l-3sh
Prerequisite: HP122 or HP301
Advanced course in contemporary dance technique and composition; studio productions with staging, lighting, costuming, and make-up as student responsibilities.

HP 325 School and Community Health 3c-0l-3sh
Prerequisite: Junior standing
Introduces students to the role of school and community in protecting and promoting the health of its members. Topics include historical development of the concepts of health and health education, identification of national and community goals to reduce risk of disease and enhance health status, and the responsibilities of both school and community toward achieving these goals.

HP 330 Ballet II 1c-0l-3sh
Prerequisites: Previous classical training and the ability to execute basic ballet techniques or permission of the instructor
An intermediate course in classical ballet technique and terminology. The course will focus on increasing technical control and coordination; developing line and placement, extending the classical ballet vocabulary; and understanding the historical development of ballet and its effective terminology.

HP 333 Psychology of Coaching 2c-0l-2sh
The goals of athletics in schools and communities; principles and responsibilities of the coach, current problems.

HP 335 Coaching and Managing of Athletic Programs 3c-0l-3sh
Lecture course designed to prepare students for coaching or administering an athletic program. Emphasizes the professional preparation and responsibilities of a coach, the support and auxiliary personnel working under and with the coach, and the coach's responsibility to the athletes, plus the administrative responsibilities of coaching.

HP 336 Organization and Administration of Recreation 2c-0l-2sh
History, theory, and philosophy of recreation; importance of play in modern world; trends in recreation; problems encountered in organizing community school programs, and principles of leadership.

HP 341 Evaluation in Health and Physical Education 3c-0l-3sh
Prerequisite: Junior standing
Evaluation theory, instructional objectives, and cognitive test construction; technical and practical considerations in testing and interpretation of test results in both health and physical education.

HP 343 Physiology of Exercise 3c-0l-3sh
Prerequisite: HP221
Physiological effects of exercise in humans. Major factors of diet, conditioning, physical fitness, maximum performance level, and fatigue are considered.

HP 344 Adapted Physical Education 3c-0l-3sh
Prerequisite: HP246
Recognition of structural deviations, corrective exercises, and physical education programs for a wide range of handicaps.

HP 345 Athletic Training I 3c-0l-3sh
Prerequisite: HP221 Human Structure and Function
Specifically designed to introduce students to the discipline of athletic training with emphasis in prevention, evaluation, management, and rehabilitation in sports medicine.

HP 346 Athletic Training Lab 2c-0l-1sh
Should be taken concurrently with HP345
Provides sufficient opportunity for each student to develop proficient skills and techniques in the areas of evaluation, assessment, taping, and rehabilitation procedures.

HP 349 Dance Repertoire I 1c-2l-1sh
Prerequisite: Department consent
Designed to permit students to be exposed to wide range of dance repertoire, original choreography, and technique.

HP 350 Dance Repertoire II 1c-2l-1sh
Prerequisite: HP349
Designed to permit students to explore dance repertoire, choreography, and technique beyond HP349.

HP 353 Driver Education Program Management 3c-0l-3sh
Emphasizes the development, organization, and management of high school driver education from the standpoint of its historical development to its present programs designed to meet the demands of the highway transportation system. Special emphasis on the role of the teacher in conducting a high-quality program that will meet with student, parent, school, and community approval.

HP 354 Application of Driver Education Instructional Modes 2c-2l-3sh
Prerequisites: HP251, HP252, HP353
Prepares prospective driver education teachers to plan, teach, and evaluate the four modes of driver education (classroom, on-road, simulation, and multiple vehicle range). Teaching high school students in supervised laboratory sessions is provided.

HP 372 Health and Physical Education for Special Populations 2c-0l-2sh
Prerequisite: EX220, Junior level or above
Methods and techniques of teaching health and physical education to special populations will be explored. Designed primarily for students majoring in special education, course will focus on handicapping conditions, limitations imposed by such conditions, and the responsibility of the special education teacher working in the physical education setting.

HP 375 Physiological Basis of Strength Training 3c-0l-3sh
Designed to give the student the anatomical and physiological basis of muscle function. Students should also gain an understanding of changes that can be made through weight training and knowledge of programs that will bring about these changes. Opportunities for working with various types of equipment will be available.

HP 408 Guided Research Problem var-2sh
Prerequisite: Permission of department chairperson
Selection and research of a problem pertinent to student interests and those of the professions of health, physical education, and recreation. Classes held on a seminar basis.

HP 410 Exercise Prescription 3c-0l-3sh
Prerequisite: HP343
Designed to teach individuals to write exercise prescriptions based upon a subject's tolerance for physical activity. Special emphasis on risk factors, techniques of evaluation, drugs, injuries, environmental factors, and motivation and their role in physical activity assessment.

HP 411 Physical Fitness Appraisal 3c-0l-3sh
Involves the selection, administration, and interpretation of various tests for appraising the physical fitness levels of individuals. Information given concerning the various fitness components, and discussions held so that each student gains an understanding of the variables to be tested.

HP 412 Physical Activity and Stress Management 3c-0l-3sh
Acquisition of necessary understanding of anxiety and stress; their nature, place in society, and intervention strategies as they relate to physical activity.

HP 413 Physical Activity and Aging 3c-0l-3sh
Presents major aspects of physical activity, its importance to the older adult, and the organization of an activity program. Attention to physiology of physical activity, effects of activity on growth and aging, exercise prescription, flexibility, overweight and obesity, and motivational strategies.

HP 426 Health Science Instruction 3c-0l-3sh
Health curriculum—K-12, methods and media of instruction in health science.

HP 430 The American Woman and Sport 3c-0l-3sh
Comprehensive, multidisciplinary analysis of the problems, patterns, and processes associated with the sport involvement of girls and women in our culture. Presents historical perspective with an emphasis on physiological, psychological, and sociocultural influences.

HP 434 Advanced Soccer Workshop 1c-2l-1sh
Prerequisite: HP208 or department acceptance of experience
Principles of attack and defense and their application in group and team play. Studies team play, in the main, using small-sided games. Participants will observe, teach, evaluate, and be evaluated. Summer only.

HP 441 Psychosocial Implications for Health and Physical Education 3c-0l-3sh
Prerequisite: Senior standing
A study of psychological and sociological influences, both theoretical and empirical, and their effects upon health and physical performance.

HP 442 Seminar in Health, Physical Education, and Recreation I 3c-0l-3sh
Theory and philosophy of health, physical education, and recreation; current issues and problems; innovative and creative programs.

HP 447 Cardiopulmonary Resuscitation (CPR) Instructor 1c-1l-1sh
Prerequisite: Basic CPR certification
Study of methods and skills necessary to certify instructors of cardio-pulmonary resuscitation and multimedia first aid. Successful completion of requirements leads to certification by the American Health Association and the American Red Cross. Summer only.

HP 450 Curriculum and Programming in Sexuality Education 3c-0l-3sh
Topics include anatomy and physiology of the human reproductive tracts, development, birth defects, contraception, venereal disease, and abortion. Not for credit toward degrees in Biology.

HP 481 Special Topics var-1-3sh

HP 482 Independent Study var-3sh

HP 493 Internship var-3-12sh
Educational opportunity which integrates classroom experience with practical experience in community service agencies or industrial, business, or governmental organizations. Junior standing required.

HR: Hotel, Restaurant, and Institutional Management
Department of Hotel, Restaurant, and Institutional Management
College of Health and Human Services

HR 101 Introduction to Hospitality Management 3c-0l-3sh
Focuses on the development of the hospitality industry and career opportunities within hotel and restaurant chains and independents. Guest speakers address various hospitality management topics. (Replaced FN101 in 1990)

HR 115 Introduction to Tourism 3c-0l-3sh
Prerequisites: HR101; majors only
Analyzes the economic and social impact of tourism, its promotion and implementation. Acquaints student with services needed by tourists, the role of the travel agent, and tourism organizations. (Replaced FN115 in 1990)

HR 259 Hospitality Purchasing 3c-0l-3sh
Prerequisite: FN150 or equivalent
Includes sources, standards, grades, methods of purchase, and storage of various foods, beverages, and fixtures. Emphasis on the development of purchasing policies and specifications. (Replaced FN259 in 1990)

HR 299 Cooperative Education I (First Experience) 0sh
Prerequisites: Completed 30 credits, 2.0 QPA
A semester-long program designed to combine classroom theory with practical application through job-related experiences. The student is required to complete two alternating experiences; only one may be a summer. (Replaced FN299 in 1990)

HR 306 Food and Beverage Management 3c-0l-3sh
Prerequisite: FN150 or equivalent
Examines principles, processes, beverage laws, and food and beverage service, sales, promotions, and menu design as functions of the food and beverage department. (Replaced FN306 in 1990)

HR 313 Food Systems I 2c-var-4sh
Prerequisites: FN150, HR259, permission; professional chef's uniform required
A basic course in quantity food production with experience in planning, purchasing, preparing, and serving nutritionally adequate meals. Requirements of the National School Lunch program emphasized in satellite and on-premises foodservice. Requires some preparation and service outside regularly scheduled class time. (Replaced FN313 in 1990)

HR 356 Human Resources in the Hospitality Industry 3c-0l-3sh
Prerequisites: PC101, HR313
Organization and administration of hospitality business, including human resource theories and policies, work simplification, training, communication, and safety. (Replaced FN356 in 1990)

HR 357 Problems in Foods and Cuisines 0c-4l-3sh
Prerequisite: FN150
Individual problems in foods investigated with emphasis on identified weaknesses in the student's knowledge of food plus an in-depth examination of specific international cuisines. (Parallel to FN357 effective 1990)

HR 358 Food Service Equipment and Facilities Design 3c-0l-3sh
Prerequisite: HR313
Examines types and uses of food service production and service equipment with emphasis on incorporation into an effective facilities design. Field trips permit investigation of a variety of unit designs. (Replaced FN358 in 1990)

HR 360 Hotel Systems Management 3c-0l-3sh
Prerequisites: HR356, IM241, AG201
Development and application of management skills as applied to the rooms division of a hotel. Emphasis on basic front desk procedures, rooms division departmental functions and relationships, and hotel facilities development. Students use MICROS 451 system in class. (Replaced FN360 in 1990)

HR 365 Hotel Design and Maintenance 3c-0l-3sh
Prerequisite: HR356
Analyzes functions of housekeeping and maintenance departments within a hotel. Identification of various hotel design concepts and design characteristics are explored, as well as guest room layout and furnishing. (Replaced FN365 in 1990)

HR 399 Cooperative Education II (Second Experience) 0sh
Prerequisite: HR299
A semester-long program designed to combine classroom theory with practical application through job-related experiences. The student is required to serve a minimum of two alternating work experiences; only one may be a summer experience. (Replaced FN399 in 1990)

HR 401 Cost Management 3c-0l-3sh
Prerequisites: HR356, 313
Food, beverage, and labor controls for hospitality or health care operations, including relationships between budgetary information and managerial decision making to meet financial needs. (Replaced FN401 in 1990)

HR 406 Catering and Banquet Management var-3sh
Prerequisites: HR313, majors only; chef's uniform and wait-staff attire required
Profitable organization, preparation, and service of catered events in both on- and off-premises locations are the main emphases of the course. Requires meeting times other than listed in order to meet course objectives. (Replaced FN406 in 1990)

HR 408 Institutions Management 3c-0l-3sh
Prerequisites: HR313, 356, AG201, senior standing
A compendium of the concepts of managing human resources, capital, materials, equipment, and markets as related to various hospitality property systems. Focus on concept development and managerial decision making. (Replaced FN408 in 1990)

HR 411 Seminar in Hospitality Management 3c-0l-3sh
Prerequisites: HR360, HR365
Analysis of the current trends and practices within hospitality industry as related by industry professionals. Course includes researching topics and writing at least three research papers. (Replaced FN411 in 1990) Carries writing-intensive credit.

HR 413 Food Systems II 1c-6l-4sh
Prerequisites: HR313, HR356, HR401, and permission; professional chef uniform required
Food systems course with emphasis on restaurant and dining room operation. Experiences to include selection of classic cuisines, meal promotion methods, budget development, personnel training, production, and service. (Replaced FN413 in 1990)

HR 420 Hotel Sales and Services 3c-0l-3sh
Prerequisites: BL235 and HR306
Examines the types of hotels, facilities, and organizations that hold conventions or meetings from the sales perspective. Examination of procedures necessary to service the group once in-house. (Replaced FN420 in 1990)

HR 433 Educational Study Tour var-2-6sh
Comprehensive program of directed activities permits first-hand experiences in the historical and cultural aspects of the hospitality industry worldwide. Visits to renowned operations will be included in the tour. (Replaced FN433 in 1990)

HR 481 Special Topics var-3sh
Topical courses offered on an experimental basis. Check department schedule for these offerings

HR 482 Independent Study in Hospitality Management var-1-6sh
Prerequisite: 60 earned credits
Opportunity to pursue special interests beyond the scope of regular course offerings. Permission of instructor and chair required. Must apply a semester in advance.

HR 493 Internship in Hospitality Management var-6-12sh
Prerequisites: 57 earned credits, 2.0 GPA, and completion of an approved 440-hour Work Experience I
An opportunity for students to work in a supervised experience directly related to the HRIM major. Must meet university and departmental internship requirements. Minimum of 440 hours required during the internship.

Note: White uniforms including white shoes are required for all lab courses where food is prepared. Students must meet the professional dress requirements of the department

IM: Information Management
Department of Management Information Systems and Decision Sciences
College of Business

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

IM 101 Microbased Computer Literacy 3c-0l-3sh
An introductory course designed to provide students with a fundamental understanding of computers. This course familiarizes students with the interaction of computer hardware and software. Emphasis is placed on the application of microcomputers, the use of productivity software (word processing, spreadsheet management, file and data base management), and the social and ethical aspect of the impact of computers on society
Note: This course is co-listed as BE101 and CO101. Any of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

IM 241 Introduction to Management Information Systems 3c-0l-3sh
Study of management information systems and their design and implementation. General systems theory, computer hardware, and programming are emphasized then integrated to demonstrate how an MIS is developed. (Offered at branch campuses only after 1991-92)

IM 245 Introduction to Microcomputers 3c-0l-3sh
This course demonstrates how to utilize the microcomputer in business. Topics will include hardware, operating systems, word processing, spreadsheets, data base, and BASIC. Offered for Associate Degree Program at branch campuses only.

IM 251 Business Systems Analysis and Design 3c-0l-3sh
Prerequisite: IM241 or IM300
This course involves teaching the tools and techniques required for the analysis and the design of business systems. The major steps in the system's development life cycle are presented along with practical applications from the major subsystems of typical business organizations. Issues related to personnel, hardware, software, and procedures are explored as students work individually and in project teams to solve typical business application problems.

IM 255 Business Applications in COBOL 3c-0l-3sh
Prerequisites: AG201 and IM241 or IM300
This course introduces the student to the COBOL programming as it applies to business organizations and their applications. Structured COBOL concepts and methods are taught as the student learns how to solve business problems using computers. The student will be involved using files, reports, and tables to produce a variety of outputs utilized in operating and managing business activities.

IM 260 Business Computer Application Project 3c-0l-3sh
Prerequisite: IM255
Provides each student an opportunity to utilize skills and concepts presented in previous courses in the planning, design, and implementation of a comprehensive case study involving computerized business applications. Students will work in teams and individually in performing tasks that are necessary to solve each problem assigned. These tasks will include systems analysis, systems design, programming, testing, and implementing and documenting simulated business problems.

IM 300 Information Systems: Theory and Practice 3c-0l-3sh
Prerequisites: CO/BE/IM 101, AG 202
Includes basic MIS concepts, fundamentals, and practices. Broad areas of coverage are principles, the computer as a problem-solving tool, Computer-Based Information Systems (CBIS), organizational information systems, and Information Systems management. (Replaced IM 241 in College of Business core, effective fall, 1992)

IM 350 Business Systems Technology 3c-0l-3sh
Prerequisite: CO220 or IM255
Student is taught fundamental and advanced concepts of computer hardware and a procedure for evaluation and acquisition of computer hardware.

IM 370 Advanced COBOL 3c-0l-3sh
Prerequisite: CO220
Corequisite: IM350
Advanced COBOL is a continuation of introductory COBOL with an emphasis on structured methodology of program design, development, testing, implementation, and documentation of common business-oriented applications. It includes a heavy emphasis on the techniques and concepts of the table processing, file organization, and processing alternatives, internal and external sorting, subroutines, and application development for both the batch and on-line systems.

IM 372 Microcomputer Applications 3c-0l-3sh
Prerequisites: IM350, CO220, AG201, or by permission
This course demonstrates how to use the microcomputer in business and how to provide technical assistance to users of the microcomputer. Emphasis will be placed on integrating software and interfacing with mainframe computers or with minicomputers. Topics covered include microcomputer hardware, microcomputer operating systems, local area networks, and microcomputer software tools.

IM 382 Auditing for EDP Systems 3c-0l-3sh
Prerequisites: AG201, CO220, or IM255
Emphasizes the responsibility of the systems analyst to include in systems design the proper management and financial controls and audit trails in business information systems. The design of control for application programs and systems is covered. Audit software packages are examined.

IM 450 Data Base Theory and Application 3c-0l-3sh
Prerequisites: IM370, upper-division students only
After learning data structures, the student will then apply them to CODASYL compatible data base management systems, TOTAL, and IBM's data base management system. Student must develop and use a data base as part of requirement.

IM 451 Systems Analysis 3c-0l-3sh
Prerequisites: IM350 and IM255 or CO220
Develops an understanding of concepts and techniques involving conventional and structured approaches to analyzing problems of business information systems and systems definition feasibility, as well as quantitative and evaluative techniques of business information systems analysis.

IM 470 Systems Design 3c-0l-3sh
Prerequisite: IM451
Students learn tools and techniques for design of a business system. Along with classroom discussions of principles and techniques for analyzing, designing, and constructing the system, students will formulate system teams to analyze the problems of an existing business information system, to design an improved system, and to control implementation of a new system.

IM 480 Distributed Business Information Systems 3c-0l-3sh
Prerequisite: IM350
Study of the techniques involved in planning, design, and implementation of distributed processing systems. Distributed marketing, financial, and corporate accounting systems are included.

IM 481 Special Topics var-1-3sh
Prerequisite: Consent of departmental chairperson and dean, College of Business

IM 482 Independent Study var-1-3sh
Prerequisite: Consent of departmental chairperson and dean, College of Business
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member.

IM 493 Internship in MIS var-3-12sh
Prerequisites: IM370, consent of department chairperson and dean
Positions with participating business, industry, or governmental organizations provide the student with experience in systems analysis. Note: Internship IM493 can be taken, if the student qualifies, as a general elective. It does not fulfill the major-area elective requirement.

IS: International Studies
Department of Political Science
College of Humanities and Social Sciences

IS 281 Special Topics in Non-Western Studies 3c-0l-3sh
This course focuses on politics, society, and culture of a particular non-Western country or area. Course content is variable, depending on the semester. Will be taught by visiting exchange professors from non-Western countries. This Special Topics course may be offered on a continuing basis.

JN: Journalism
Department of Journalism
College of Humanities and Social Sciences

JN 105 Journalism and the Mass Media 3c-0l-3sh
Prerequisite: EN101
A critical examination of roles-goals of newspapers, magazines, radio, and television as they affect American society socially, politically, and economically.

JN 106 Basic Journalistic Skills 3c-0l-3sh
Prerequisite: EN101
Required for journalism majors but open to all students. Emphasis on grammar, punctuation, spelling, *AP Stylebook*, copyediting, headlines, and accuracy.

JN 120 Journalistic Writing 3c-0l-3sh
Prerequisite: EN101, JN106
Emphasis on intelligent use of writing ability in a journalistic style and

understanding of the why of journalism and mass media. This course practices and improves writing skills for all news media, print and broadcast.

JN 321 Feature Writing 3c-0l-3sh
Prerequisites: JN106, JN120
Designed for the student who might work in journalism or who might wish to write on a part-time or free-lance basis.

JN 323 Management in Mass Communications 3c-0l-3sh
Prerequisites: JN493 or field experience
Attention given to the process of advancement to management positions in the advertising, journalism, and public relations industries.

JN 326 Public Relations I 3c-0l-3sh
Prerequisites: JN106, JN120
Introduces students to the principles, practices, programs, and possibilities in the various areas of public relations.

JN 327 Layout Design and Production 2c-3l-3sh
Prerequisite: JN105
Provides basic techniques and theories of layout design and production, including typography, copyfitting, photo/art cropping and scaling, and steps in design process. Includes traditional paste-up and desktop publishing in the design of ads, newspapers, newsletters, brochures, and magazines.

JN 328 News Reporting 3c-0l-3sh
Prerequisites: JN105, JN106, JN120, junior/senior standing
Includes instruction in writing the news story, preparing copy, interviewing, covering special events, and similar reporting activities.

JN 337 Editing 3c-0l-3sh
Prerequisites: JN106, JN120
Stresses basic practices such as copyediting and headline writing while also focusing on guidelines for improving accuracy, clarity, transition, spelling, and punctuation of copy. Students use wire service stylebook extensively.

JN 338 News Analysis 3c-0l-3sh
Prerequisites: JN105, junior/senior standing
A current events course, this is a critical study of news and its relationship to the mass media and the public. Seminar and discussion format.

JN 343 History of the American Press 3c-0l-3sh
Prerequisites: JN106, JN120
Traces the development of the American press from its colonial roots. Emphasis on the role of the press in political and social development.

JN 344 Issues and Problems 3c-0l-3sh
Prerequisites: JN106, JN120
Students examine critical case histories of ethical and professional situations and circumstances in the mass communication industry in a lecture and discussion format.

JN 345 Sports Journalism 3c-0l-3sh
Prerequisite: JN120
Emphasizes skills for covering, writing, and editing of sports and introduces students to specific practices in newspaper, radio-TV, and sports information work.

JN 346 Advanced Reporting 3c-0l-3sh
Prerequisite: JN328
Designed for the student seeking a career as a working journalist, this course refines basic reporting and deals with more sophisticated techniques and coverage.

JN 347 Journalism Law 3c-0l-3sh
Prerequisites: JN328, junior/senior standing
Open to nonmajors by permission of the instructor. Survey of the major Supreme Court and state court rulings governing the mass media, especially the news media. Areas include libel, antitrust, free press/fair trial, privacy. Approach is nontechnical.

JN 348 The Editorial Page 3c-0l-3sh
Prerequisite: Junior/senior standing
Emphasis on the writing of vigorous but thoughtful and fair editorials. Study of contemporary practice and policy on letters to the editor, columnists, cartoons, the op-ed page.

JN 349 Public Affairs Reporting 3c-0l-3sh
Prerequisites: JN106, JN120, JN328
This seminar course covers the specialized field of reporting government and public service beats. Techniques and sources are covered in lecture and demonstration and through guest speakers.

JN 350 Advertising Writing 3c-0l-3sh
Prerequisite: Instructor permission
This is a basic course in the preparation of advertising copy and continuity for all media. It is a combination of lecture and laboratory course. Enrollment is limited to fifteen upperclass majors per semester.

JN 375 World News Coverage 3c-0l-3sh
Prerequisite: Sophomore standing
A course dealing with international news events and analysis of international new coverage in sources from around the world. Emphasis placed on analyzing comparative coverage of events in different sources. Students study not only current international news but also how it is reported. The goal of the course is fostering a critical attitude toward news.

JN 390 Public Relations II 3c-0l-3sh
Prerequisite: JN326
A public relations writing class that includes assignments such as releases, features, newsletters, reports, biographies, rewrites, hometown stories, copyediting, interviewing, research, and special projects.

JN 391 Presentation Making 3c-0l-3sh
Prerequisite: Junior/senior standing
Gives the student practice in writing and making oral presentations based on public relations cases and problems. Familiarizes the student with problem solving and small group communication skills necessary for those working in the area of public affairs.

JN 392 Problem Solving in PR 3c-0l-3sh
Prerequisite: Junior/senior standing
Introduces students to techniques for analyzing and tracking information flow in organizations. Introduces students to creative problem-solving techniques which are standard practice in corporate research groups.

JN 393 Document Design I 3c-0l-3sh
Prerequisite: Junior/senior standing
Teaches students advanced principles of document design and gives them the opportunity to apply techniques of rhetorical/stylistic analysis, general problem solving, and holistic information display to a wide variety of writing formats used in business, industry, and government.

JN 394 Document Design II 3c-0l-3sh
Prerequisite: Junior/senior standing
Gives students advanced work in preparation of substantial corporate and government documents such as annual reports, lengthy project reports, and research reports, etc. Emphasizes skills in research of public and government documents, data analysis and problem solving, holistic information display, writing, and editing.

JN 481 Special Topics var-1-3sh
These courses vary from semester to semester, covering a number of journalism specialties. From time to time they are converted to permanent course numbers.

JN 482 Independent Study var-1-6sh
Prerequisite: Departmental approval
Opportunities for independent study that goes beyond the usual classroom activities. Approval of department chairperson required.

JN 493 Internship var-6-12sh
Prerequisites: JN105, JN106, JN120, JN328, junior/senior standing, department approval
On-the-job training opportunities in journalism and related areas. Maximum of 6sh may be applied to 30sh minimum of major.

LA: Latin
Department of Spanish and Classical Languages
College of Humanities and Social Sciences

LA 101 Elementary Latin I 4c-0l-4sh
For beginning students. Emphasis is on oral and reading skills. Students will

learn most of the Latin noun system, they will also learn how to answer simple and moderately difficult Latin questions. There are also short readings in easy Latin. Students learn significant differences between Latin and English. Attendance is required. [Replaced LA151]

LA 102 Elementary Latin 4c-0l-4sh
A continuation of Latin 101. In grammar, students finish the noun system and learn several Latin tenses, including the perfect tense. Latin questions, oral and written, remain an important part of the course, as do the readings. There are class discussions and a paper on readings in English from Sophocles, Tacitus, and Cicero. Attendance is required. [Replaced LA152]

LA 201 Intermediate Latin 4c-0l-4sh
Intermediate Latin. More of the verb system is learned, while grammatical studies continue, more emphasis is placed on learning how to read short, intermediate-level selections from Latin literature. Oral and written questions continue. Ovid's *Metamorphoses* is the topic for class discussion and a paper. Liberal Studies credit is given. [Replaced LA251/252]

LA 351 Advanced Latin I 3c-0l-3sh
Reviews grammar in depth; analyzes the structure of the language. Written themes are not required. Selections from Latin prose are read for knowledge of their content and for developing knowledge of the structure of the language.

LA 352 Advanced Latin II 3c-0l-3sh
Continuation of Latin 351. Selections are from poetry this semester.

LA 361 Development of Roman Culture and Literature 3c-0l-3sh
Latin poetry and history will be read to show the influence of political and social ideas on literature; emphasis will be on the contrast between the Republican and Imperial periods. Some reading will be in Latin; most will be in English.

LA 362 Latin Conversation and Composition 3c-0l-3sh
Aims at the ability to speak Latin on a conversational level and to write grammatically correct Latin prose.

LA 371 Survey of Latin Literature I 3c-0l-3sh
Comprehensive view of Latin literature from Ennius through the Augustan Age.

LA 482 Independent Study var-1-3sh
An opportunity to engage in an in-depth analysis of some topic dealing with the Latin language and culture through consultation with a faculty member. Permission is required.

LB: Library
The University Libraries
Academic Affairs Division

LB 151 Introduction to Library Resources var-1sh
A lecture/laboratory course (fourteen one-hour classes) which provides an introduction to the resources of a university library, how those resources are organized, and how to effectively use those resources.

LC: Learning Center
The Learning Center
Student Affairs Division

LC 070 Reading Skills for College Study 3c-0l-3sh
This course is designed to assist students in the development of college-level reading skills with emphasis on textbook reading. Includes literal and critical comprehension skills, vocabulary development, and reading efficiency. This course carries institutional, nondegree credit, and attendance is required.

LC 090 Introduction to College Math I 3c-0l-3sh
Prerequisite: A student may not register for this course after successfully completing any course offered by the mathematics department without the written approval of the Learning Center director.
Reviews basic computational skills and their applications. Includes operations with whole numbers, decimals, and fractions; the concepts of ratios, proportions, and percents; basic geometric principles, and an introduction to algebra. This course carries institutional, nondegree credit, and attendance is required.

LC 095 Introduction to College Math II 3c-0l-3sh
Prerequisite: A student may not register for this course after successfully completing any course offered by the mathematics department, without written approval of the Learning Center director. Introduces beginning algebraic concepts, including signed numbers; rules and properties of equations, exponents, polynomials, factoring; algebraic fractions; graphs and linear equations, inequalities, and radical expressions. This course carries institutional, nondegree credit, and attendance is required.

LR: Industrial and Labor Relations
Department of Industrial and Labor Relations
College of Humanities and Social Sciences

LR 426 Case Studies in Labor-Management Relations 3c-0l-3sh
In-depth study of daily labor-management relationships in a variety of organizational settings through utilization of case study technique. Focuses on a problem-solving approach to the legal and contract administration components of the labor-management relationship.

LR 480 Principles and Practices of Collective Bargaining 3c-0l-3sh
An examination of the historical, legal, and functional parameters of collective bargaining. Topics covered include the organizing process, negotiations, contract administration, dispute resolution, and public sector labor relations.

LR 481 Special Topics in Industrial and Labor Relations 3c-0l-3sh
Advanced, innovative, or exploratory topics in industrial and labor relations.

LR 499 Independent Study var-1-3sh
Independent reading and research under the direction of a faculty member.

LS: Liberal Studies
Liberal Studies Program
Academic Affairs Division

LS 499 Senior Synthesis 3c-0l-3sh
Prerequisite: 73 or more semester hours earned
This course helps students understand and handle complex intellectual and social issues from multiple perspectives. A selection of topics is available each semester and summer session, as announced in the undergraduate course schedule. Students should schedule the course during the senior year, or at least no earlier than the last half of the junior year.

MA: Mathematics
Department of Mathematics
College of Natural Sciences and Mathematics

MA 100 Basic Algebra 3c-0l-3sh
Note: A student may not take MA100 Basic Algebra after successfully completing MA110 or a calculus course without the written approval of the mathematics department chairperson.
A basic course in algebra including factoring, exponents and radicals, systems of linear equations, complex fractions, and inequalities. Designed for those students who lack the basic algebraic skills required in MA110 Elementary Functions. This course will not meet General Education or Liberal Studies math requirements.

MA 101 Foundations of Mathematics 3c-0l-3sh
Introduces logic and mathematical way of analyzing problems; develops an appreciation for nature, breadth, and power of mathematics and its role in a technological society; and introduces useful mathematics or mathematics related to student interest. Possible topics include logic, problem solving, number theory, linear programming, probability, statistics, intuitive calculus, introduction to computers, mathematics of finance, game theory.

MA 102 Finite Mathematics 3c-0l-3sh
Prerequisite: Four years of high school mathematics or a college mathematics course. Credit for MA102 toward graduation will not be given to anyone with credit in any mathematics course beyond calculus.

An informal approach to practical applications of mathematics. Fundamental concepts of enumeration, matrices, linear systems, predicate calculus, probability, and series will be introduced and used in considering mathematical models. Calculators or computer packages may be used in solving mathematical problems.

MA 110 Elementary Functions 3c-0l-3sh
Note: A student may not take MA110 Elementary Functions after successfully completing a calculus course without the written approval of the mathematics department chairperson.
For students not prepared to begin the study of calculus; topics include polynomial, exponential, logarithmic, and trigonometric functions.

MA 117 Principles of Mathematics 3c-0l-3sh
This course is an introduction to the nature of mathematics, designed specifically as a first course for mathematics education majors to experience several facets of mathematics including deduction, induction, problem solving, discrete mathematics, and theory of equations. Enrollment open to secondary mathematics education majors only.

MA 121 Calculus I for Business, Natural, and Social Sciences 4c-0l-4sh
Note: A student may not take MA121 Calculus I for Business, Natural, and Social Sciences after successfully completing another calculus course without the written permission of the mathematics department chairperson.
Prerequisite: MA110 or equivalent high school preparation
Introduces non-Math major to analytic geometry, elementary functions (including logarithmic and exponential functions), central ideas of the calculus (limit, derivative, and integral), applications of derivatives to business, social, and natural sciences.

MA 122 Calculus II for Business, Natural, and Social Sciences 4c-0l-4sh
Applications of integrals to business, natural, and social sciences, functions of several variables, trigonometric functions, sequences and series, numerical methods, differential equations.

MA 123 Calculus I for Physics and Chemistry 4c-0l-4sh
Prerequisites: High school algebra, geometry, and trigonometry
Functions, limits, continuity, derivatives, application of the derivative, integral, and applications of the integral. (Trigonometric and inverse trigonometric functions are included throughout the course.)

MA 124 Calculus II for Physics and Chemistry 4c-0l-4sh
Logarithmic and exponential functions, techniques of integration, sequences and series, differential calculus of functions of several variables, multiple integrals, line integrals, surface integrals, differential equations with application to physical problems.

MA 127 Calculus I 4c-0l-4sh
Prerequisite: Permission of the mathematics department
The first in a three-course series of courses which stresses the theory of the calculus as well as the application in problem solving. Topics to be included are real numbers, an introduction to analytic geometry, functions, limits and continuity, derivatives and applications, the differential and antidifferentiation.

MA 128 Calculus II 4c-0l-4sh
Prerequisite: Permission of the mathematics department
The second in a three-course series of courses stresses the theory of calculus as well as the application in problem solving. Topics to be included are definite integrals and applications, logarithmic and exponential functions, trigonometric and inverse trigonometric functions, polar coordinates, hyperbolic functions, indeterminate forms, improper integrals, and Taylor's formula.

MA 151 Elements of Mathematics I 3c-0l-3sh
Topics included are sets, concepts of logic, mathematical systems, systems of numeration, developing the set of integers, rational numbers, and real numbers.

MA 152 Elements of Mathematics II 3c-0l-3sh
Prerequisite: MA151
Topics included are sentences in one variable, sentences in two variables, nonmetric geometry, metric geometry, coordinate geometry, introduction to statistics and probability, computers, and calculators.

MA 171 Introduction to Linear Algebra 3c-0l-3sh
Introduction to vector spaces, linear transformations, determinants, and matrix algebra. Topics are presented in a direct and intuitive approach.

MA 214 Probability and Statistics for Business Majors 3c-0l-3sh
Designed to introduce the study of probability theory, discrete random variables and probability distributions, empirical frequency distributions, theoretical frequency distributions, statistical investigations and sampling, and sampling distributions.

MA 216 Probability and Statistics for Natural Sciences 4c-0l-4sh
Prerequisite: MA121
Frequency distributions, measures of central tendency and variation, probability, probability distributions, sampling distributions. Hypothesis testing for means, variances, proportions. Correlation and prediction, regression, analysis of variance, and nonparametric statistics. Emphasis on applications.

MA 217 Probability and Statistics 3c-0l-3sh
(For non-Math majors) Frequency distributions, measures of central tendency, variation, elementary probability, sampling, estimation, testing hypotheses, correlation, and regression; emphasis on applications as opposed to theoretical development of topics.

MA 219 Discrete Mathematics 3c-0l-3sh
Prerequisites: CO110, and MA 123, 127, or 122
Topics include set algebra, mappings, relations, semigroups, groups, directed and undirected graphs, Boolean algebra, and propositional logic, with examples and applications of these to various areas of computer science. Emphasis placed on developing an intuitive understanding of basic structures rather than formal theories and influence of these topics on theory and practice of computing.

MA 227 Calculus III 4c-0l-4sh
Prerequisite: Permission of the mathematics department
The third in a three-course series of courses which stresses the theory of calculus as well as the application in problem solving. Topics to be included are vectors in the plane, parametric equations, vectors in three-dimensional space, solid analytic geometry, differential calculus of functions of several variables, directional derivatives, gradients, applications of partial derivatives, and infinite series.

MA 241 Differential Equations 3c-0l-3sh
Prerequisites: MA122, MA124, or MA227
Emphasis is placed on techniques of solution and elementary physical applications. A thorough study is made of differential equations classified as order one-degree one, linear, and nonhomogeneous. Solution techniques involving reduction of order techniques, the differential operator, and infinite series are introduced.

MA 271 Introduction to Algebraic Structures 3c-0l-3sh
Prerequisite: MA171
Gives student basic ideas of contemporary mathematics. Includes mathematical logic, algebra of sets, equivalence relations and partitions of sets, functions, and fundamentals of group theory. Methods of proof in area of abstract mathematics.

MA 317 Introduction to Probability and Statistics 3c-0l-3sh
Prerequisites: MA152, Elementary Education concentration
Introduces students to elementary concepts of probability and statistics which will enable them to analyze data, make predictions, and determine which concepts may be used with children.

MA 342 Advanced Mathematics for Applications 4c-0l-4sh
Prerequisite: MA241
Deals with the application of mathematics to problems of science. Emphasis is placed on the three phases of such an application and on the development of skills necessary to carry out each step: (a) translation of the given physical information to a mathematical model; (b) treatment of the model by mathematical methods; (c) interpretation of the mathematical result in physical terms. Topics included are vector calculus, integral theorems, Fourier series, partial differential equations, and the Laplace transformation.

MA 350 History of Mathematics 2c-0l-2sh
Prerequisite: Completion of a calculus sequence or permission of the instructor

The history of mathematics is concerned with the origins, philosophy, and development of the mathematical sciences.

MA 353 Theory of Numbers 3c-0l-3sh
Prerequisite: MA271 with a C or better grade
Divisibility, congruences, primitive roots, number theoretic functions, diophantine equations, continued fractions, quadratic residues.

MA 355 Foundations of Geometry I 3c-0l-3sh
Prerequisites: MA171, MA271 with a C or better grade
Studies various groups of transformations and geometries associated with these groups in the Euclidean plane. The Euclidean Similarity and affine and projective groups of transformations are studied.

MA 363 Mathematical Statistics I 3c-0l-3sh
Prerequisites: MA122, MA124, or MA227
Probability theory necessary for an understanding of mathematical statistics is developed. Applications of set theory to models, combinations and permutations, binomial, Poisson and normal distributions, expected values, and moment generating functions

MA 364 Mathematical Statistics II 3c-0l-3sh
Prerequisite: MA363
Multivariate distributions, change of variable technique, chi-square distribution, estimation, confidence intervals, hypothesis testing, contingency tables, goodness of fit. Practical applications are used to aid in the development.

MA 366 Preparation for Actuarial Examinations 1c-0l-1sh
Prerequisites: MA171 and calculus sequence
This course provides an introduction to the actuarial profession and helps the student prepare for the first actuarial examinations. The examination preparation consists of studying sample actuarial examinations and related material. The student is required to take the actuarial examination. The student should be aware that for most students, considerable study beyond the requirements of this one-credit course will be required in order to pass the actuarial examinations.

MA 371 Linear Algebra 3c-0l-3sh
Prerequisites: MA171, MA271 with a C or better grade
Vector spaces and linear transformations are studied in a theoretical setting. Also, canonical forms and multilinear algebra are studied.

MA 417 Statistical Applications 3c-0l-3sh
Prerequisites: MA214, MA216, or MA217 (For non-Math majors)
Using computer programs, a wide array of statistical procedures for educational research workers will be explored. Basic concepts of statistical inference and prediction will be reviewed, including regression analysis and prediction, hypothesis testing, analysis of variance and covariance, and partial and multiple correlation. Emphasis is on use of the computer and interpretation of computer printouts, along with understanding techniques employed. No computer knowledge is necessary

MA 418 Sampling Survey Theory and its Application 3c-0l-3sh
Prerequisites: (For non-Math majors) MA214, 216, or 217
Directed to the student who is or will be doing quantitative research, commissioning large-scale surveys, and evaluating the results. Sampling techniques and statistical principles underlying their use will be introduced. Consideration to the practical problems associated with implementation.

MA 420 Pre-Calculus Mathematics I 3c-0l-3sh
Prerequisites: MA152; Elementary Education concentration
Examines the function concept as applied to elementary real number functions and graphing techniques for these functions. Topics include real number functions such as absolute value, step, linear, quadratic, and other polynomial functions, trigonometric and other periodic functions, exponential logarithmic functions, and all other inverse functions. Students will examine curricular materials that develop function concepts in Grades K-8.

MA 421 Advanced Calculus I 3c-0l-3sh
Prerequisites: MA124 or MA227, MA271 with a C or better grade
Study of set theory, real number system, functions topology of Cartesian space, sequences, convergence and uniform convergence, continuity, and uniform continuity.

MA 422 Advanced Calculus II 3c-0l-3sh
Prerequisite: MA421
Includes the study of convergence sequences in Rn, global properties of continuity, uniform continuity, differentiation of Rn, Riemann integrals, and infinite series.

MA 423-424 Complex Variable I and II each 3c-0l-3sh
Prerequisite: MA124 or MA227
Introduction to the theory of functions of a complex variable; topics included are elementary functions, analytic functions, conformal mapping, integration, series, and application

MA 425 Applied Mathematical Analysis I 3c-0l-3sh
Prerequisites: Calculus sequence, introductory linear algebra, or permission of instructor
This course provides the necessary background for an understanding of mathematical programming, proofs of convergence of algorithms, convexity, and factorable functions. It also develops necessary concepts in matrix theory which are required to develop efficient algorithms to solve linear and nonlinear programming models.

MA 427 Introduction to Topology 3c-0l-3sh
Prerequisite: MA271 with a C or better grade
Study of sets, functions, continuity, compactness, the separation axioms, and metric spaces; application of topology to analysis is demonstrated.

MA 445 Programming Models in Operations Research 3c-0l-3sh
Prerequisites: Two-semester sequence of calculus and MA 171 or permission of instructor
Development of deterministic mathematical models for managerial and social sciences with relevant computational techniques

MA 446 Probabilistic Models in Operations Research 3c-0l-3sh
Prerequisites: Two-semester sequence of calculus, MA363
Development of probabilistic mathematical models for managerial and social sciences with relevant computational techniques.

MA 447 Simulation Models 3c-0l-3sh
Prerequisites: Completion of the calculus sequence; background in statistics and probability, and familiarity with concepts of programming (knowledge of a particular programming language not required)
This course considers the types of models that are basic to any simulation and methods for building and using such models. It includes discrete and continuous system simulations, their applications, and an introduction to SLAM II (Simulation Language for Alternative Modeling).

MA 450 Mathematics for Early Childhood 3c-0l-3sh
Prerequisites: MA151, Elementary Education concentration
Study of child-centered, activity-oriented mathematics program for early childhood education. Students gather and construct manipulative materials and become familiar with commercially produced materials. Prenumber activities, number activities, numeration, operations on whole numbers, fractional numbers, geometry, measurement, problem solving.

MA 451 Numerical Methods for Supercomputers 3c-0l-3sh
Prerequisites: MA121 and MA122, or MA123 or MA127, MA171, CO250
Super computers make use of special computer architectures—vector and parallel processors—in order to achieve the fastest processing speed currently available. Students will be introduced to these features and will learn how numerical algorithms can be constructed to exploit supercomputers' capabilities. Students will gain practical experience in programming for the Cray, YMP, in incorporating existing scientific software packages into user-written programs, in submitting remote jobs to the Pittsburgh Supercomputer Center, and in producing animated graphical output to summarize the typically large volume of output data generated by large scientific programs. (Also offered as CO451, may not register for duplicate credit.)

MA 452 Seminar in Teaching Algebra var-1-4sh
MA 453 Seminar in Teaching Geometry var-1-4sh
MA 454 Seminar in Teaching General Mathematics var-1-4sh
Seminars are designed for pre-student teacher. Students in each class will gain insights into the problems in teaching each topic and become aware of the materials available and methods of instruction geared to the special type of student. Education majors only.

MA 456 Principles of Geometry I 3c-0l-3sh
Prerequisites: MA152, Elementary Education concentration
Students become acquainted with an informal, intuitive approach to geometry. Activities and materials for teaching geometrical concepts to children are an integral part of the course.

MA 457 Introduction to Number Theory 3c-0l-3sh
Prerequisites: MA152, Elementary Education concentration
Introduction to topics of elementary number theory including divisibility, prime numbers, factorization, modular arithmetic, problem solving, and place of number theory in the elementary school curriculum. Students will examine many number theory activities which can help to strengthen skills with basic facts in an interesting, nonroutine setting.

MA 458 Introduction to Logic and Logical Games 3c-0l-3sh
Prerequisites: MA152, Elementary Education concentration
Introduction to some of the basic ideas, terminology, and notation of mathematical logic and Boolean algebra as well as games of strategy that involve logic. In addition, an investigation of how logic is taught and used in various programs for the elementary school.

MA 459 Computer-related Topics in the Elementary and Middle School 3c-0l-3sh
Prerequisites: MA152, Elementary Education concentration
Provides teachers with concepts and techniques necessary to teach computer-related topics to children. Participants will work with elementary school children throughout the semester.

MA 460 Computers and Calculators in Secondary School Mathematics Instruction 3c-0l-3sh
Prerequisite: CO205
Students will explore how computers and calculators can be used as tools to enhance the instruction in secondary school mathematics.

MA 465 Topics in Statistics 3c-0l-3sh
Prerequisite: MA364
Correlation and regression from applied and theoretical points of view, bivariate and multivariate normal distribution, analysis of variance, nonparametric methods. Practical problems involving statistical techniques and use of computer statistical packages. Knowledge of computer programming is not required.

MA 471 Basic Concepts of Algebra 3c-0l-3sh
Prerequisites: MA152, Elementary Education concentration
Concepts of basic algebraic structures such as group, ring, integral domain, field, and vector space are studied within the context of the mathematical maturity of the student. Other topics include relations and functions, polynomials and polynomial equations, systems of equations, and inequalities. Consideration given to development of these concepts in the mathematics curriculum.

MA 476 Abstract Algebra I 3c-0l-3sh
Prerequisites: MA171, MA271 with a C or better grade
Development of theory of integral domains, fields, rings, and groups, designed to develop student's power to think for himself or herself and to improve ability to construct formal proofs.

MA 477 Abstract Algebra II 3c-0l-3sh
Prerequisite: MA476
Designed to have student continue study of algebra by use of axiomatic method; Euclidean domains; polynomial domains and extension fields included; interrelationships between these structures and simpler structures, particularly groups and rings, are developed as in study of Galois group of a polynomial and in an introduction to Galois theory.

MA 481 Topics in Mathematics var-1-3sh
(Credit toward Math major)

MA 490 Independent Study var-1-3sh

MA 493 Internship in Mathematics var-3-12sh
Prerequisites: Completion of core curriculum, completion of application
Positions with participating companies or agencies provide students with experience in mathematics-related work under the supervision of the agencies and faculty. Requirements include one to three on-site consultations, two university consultations, completion of progress reports, and presentation of final cumulative paper. Internship credit may not be used in fulfilling math major course requirements.

MG: Management
Department of Management
College of Business

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

MG 275 Introduction to Entrepreneurship 3c-0l-3sh
Prerequisites: AG201, EC121, sophomore status
Entrepreneurship is defined, common myths are discussed, and characteristics of entrepreneurs are identified. Basic characteristics of entrepreneurs are reviewed. This course includes topics such as the psychology of entrepreneurship, economic and social aspects of entrepreneurship; history; techniques of purchasing a company; new venture initiation; and risk taking.

MG 300 Human Resource Management 3c-0l-3sh
Prerequisite: PC101
Designed to recognize and evaluate the application of behavioral science approaches in the study of human resource management. Topics include recruiting and selection, training, management development, performance evaluation, communications, wage and benefit programs, and management-labor relations.

MG 310 Principles of Management 3c-0l-3sh
The purpose of this survey course of instruction is to provide the student with an in-depth identification and understanding of the relevant theories, concepts, and principles underlying the management function.

MG 311 Human Behavior in Organizations 3c-0l-3sh
Prerequisite: PC101
Human problems of management. Basic ideas and theories from the behavioral sciences as they apply to human behavior in organizations are presented. Management solutions to problems resulting from individual-organization interaction are emphasized.

MG 325 Small Business Management 3c-0l-3sh
Prerequisites: MG275, MK320, FI310, MG310
A survey course emphasizing those aspects of small business management not covered elsewhere in the student's program. Key topics include Real Estate, Site Selection, and Facilities Management; Purchasing Management, Vendor Relations, and Inventory Systems; Plant Security, Loss Control, Risk and Insurance Management; Human Resources Management, Employee Benefits, Motivation, and Leadership; Small Business Market Research, Customer Services Management, and Pricing. A review of other elements of the small firm's milieu is included as a necessary contextual element (e.g., planning, accounting, financing, law).

MG 330 Production and Operations Management 3c-0l-3sh
Prerequisites: MA121, MA214, junior status, College of Business or approved major
Study of the process of converting an organization's inputs into outputs whether in goods-producing or service industries. Provides an overview of concepts, tools, and techniques used in management of production and operations function in organizations.

MG 400 Wage and Salary Administration 3c-0l-3sh
Prerequisite: MG300
Studies the policies and programs that help managers design and administer compensation systems for private and public sector enterprises. Includes motivation theories and practice designing of compensation systems.

MG 401 Management Development and Training 3c-0l-3sh
Prerequisites: MG300, MG310
Principles, problems, and procedures in planning, organizing, directing, and controlling all aspects of training and development programs in a business enterprise. Methods of improving and development of managerial skills are emphasized.

MG 402 Seminar in Human Resource Management 3c-0l-3sh
Prerequisites: MG300, graduating senior

An integrative course in Human Resource Management. Considers current issues in human literature in the field and contemporary issues in human resource management using case studies.

MG 403 Small Business Planning 3c-0l-3sh
Prerequisites: MG325, AG300, IM101 or BE101 or CO101
This course will integrate the content of much of the business core and relate it to the business planning for small businesses and entrepreneurial efforts. The student will be introduced to the concepts which will support the development of an effective business plan.

MG 428 Seminar in Management 3c-0l-3sh
Prerequisites: MG310
An integrative course in Management. Considers current literature in the field and contemporary issues in management using case studies.

MG 432 Business and Society 3c-0l-3sh
Overview of the interactions between business and the larger social system in which it operates. Considers the problem, solutions, and future directions of societal issues and their relationships to the business environment. Topics discussed include consumerism, the morality of advertising, self-regulation, pollution and ecology, overpopulation, government regulation, and the social and ethical responsibilities of business and industry. (Also offered as MK342; may not be taken for duplicate credit)

MG 481 Special Topics in Management var-1-3sh
Covers advanced, innovative, or exploratory topics and disciplines within management. Specific content items developed by instructor. Credits may be applied to either required (by permission of department chairperson) or free electives in a student's program.

MG 482 Independent Study var-3sh
Prerequisite: Consent of departmental chairperson
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member.

MG 492 Small Business/Entrepreneurship Internship var-3-12sh
Prerequisites: MG403, permission of department chairperson, 2.75 overall QPA, all other requirements of the College of Business
This course involves practical entrepreneurial experience of on-site consulting with small business firms. Students will generally work for a semester on functionally related topics in accounting, finance, marketing, and MIS or on general topics such as business planning, forecasting, policy, and general management.

MG 493 Management Internship var-3-12sh
Practical experience to develop knowledge and skills in the application of theory to actual problems in a nonclassroom setting. A maximum of 3sh of internship in the student's major may be applied toward the management and human resource management major area elective requirements. Additional internship credit must be used as free electives only. Admission only by permission of the department chairperson and dean, College of Business.

MG 495 Business Policy 3c-0l-3sh
Prerequisites: Completion of all Business Core requirements or permission, graduating seniors
A capstone case analysis course designed to give the student practice in applying business theories to the solution of management problems. An analysis of how top management determines strategy and policy and influences the philosophy and character of the company. To develop in the student a general management viewpoint that integrates the various functions of the organization.

MH: Music History
Department of Music
College of Fine Arts

MH 101 Introduction to Music 3c-0l-3sh
Course presumes no technical background but does utilize the varied musical experiences of each individual to help extend interest as far as possible. Attendance at various concerts of university organizations, cultural life events, and visiting artist concerts is required to augment listening experiences of students. Offered as MU101 prior to Summer, 1989.

MH 103 Perspectives in Jazz 3c-0l-3sh
Designed to give an overview of the development and contributions of jazz in the American culture and provide a background for a more intensive and detailed study of jazz for the Jazz Studies major. Offered as MU103 prior to Fall, 1989.

MH 301 Music History I 3c-0l-3sh
Prerequisites: HH195, EN101, EN202, HH305
Intensive study of the history and style of Medieval, Renaissance, and Baroque music. Considerable analytical listening required.

MH 302 Music History II 3c-0l-3sh
Prerequisites: MH301 or permission
Intensive study of the history and styles of Classical, Romantic, and 20th-century music to 1950. Considerable analytical listening required.

MH 322 Medieval and Renaissance Music 3c-0l-3sh
Intensive study of the plainchant foundations in the early Middle Ages; the origins of polyphony, sacred and secular music of the 13th to the 16th centuries; special emphasis on Dulay, Josquin, Palestrina, and their contemporaries. [Offered as MU322 prior to Fall, 1989. Title prior to Fall, 1992, was Renaissance Music.]

MH 323 The Baroque Era 3c-0l-3sh
Prerequisites: MH301, 302
Extends from Monteverdi through Bach and Handel and considers vocal and instrumental forms, styles, and practices of era. Offered as MU323 prior to Fall, 1989.

MH 324 The Classical Era 3c-0l-3sh
Prerequisites: MH301, 302
A survey of music from about 1725 to about 1827, with special attention to the music of Mozart and Haydn. Consideration is given also to the works of D. Scarlatti and C.P.E. Bach. [Offered as MU324 prior to Fall, 1989. Titled as Eighteenth Century Music prior to Fall, 1992.]

MH 325 The Romantic Era 3c-0l-3sh
A survey of music from about 1800 to 1910, with attention directed to the earlier romantic composers such as Beethoven, Schubert, Mendelssohn, and Berlioz through the later romantic composers such as Wagner, Tschaikowsky, Mahler, and Dvorak as well as others. [Offered as MU325 prior to Fall, 1989. Titled as The Early Romantic Period prior to Fall, 1992.]

MH 420 The 20th Century 3c-0l-3sh
Prerequisites: MH301, 302
A survey of the stylistic trends of music from 1900 to the present, beginning with Debussy, Ravel, and other impressionists through the music of Schonberg, Stravinsky, Webern, Honegger, and Milhaud. Offered infrequently. [Offered as MU420 prior to Fall, 1989. Titled as Contemporary Music prior to Fall, 1992.]

MH 421 American Music 3c-0l-3sh
Prerequisites: MH301, 302
A study of history and literature of music in America from 1600 to the present day. Offered as MU421 prior to Fall, 1989.

MI: Marine Science
Marine Science Consortium/Biology Department
College of Natural Sciences and Mathematics

MI 110 Introduction to Oceanography var-3sh
Introduction to physical, chemical, biological, and geological aspects of oceans and methods and techniques of oceanography. Lab emphasis placed on at-sea assignments.

MI 211 Field Methods in Oceanography var-3sh
Prerequisite: MI110 or consent of instructor
Familiarization with dynamic marine environment involving use and application of oceanographic instruments and sampling devices.

MI 212 Navigation var-3sh
Prerequisite: Four years' high school math or equivalent or consent of the instructor
Covers navigation, i.e., the art and science of safely bringing a vessel from one position to another in a body of water. Course divided into (1) brief historical

background; (2) navigation within sight of land, i.e., piloting; (3) navigation in the open sea, including electronic navigation methods.

MI 221 Marine Invertebrate Zoology var-3sh
Prerequisite: One year of biology or consent of instructor
Study of marine invertebrates with emphasis on development, reproduction, structure, function, and classification of selected marine organisms.

MI 241 Marine Biology var-3sh
Prerequisites: Botany and zoology or consent of instructor
Study of plant and animal life in marine environment with emphasis placed upon physical and chemical factors affecting biota.

MI 250 Management of Wetland Wildlife var-3sh
Prerequisites: None
The ecology and management of wetland wildlife, particularly of freshwater marshes and saltwater marshes. Special emphasis on ecosystem approach

MI 260 Marine Ecology var-3sh
Prerequisite: One year of biology or consent of instructor
A course in ecology of marine organisms

MI 270 Scuba Diving var-3sh
Prerequisites: Swimming ability and good health. (A standard diving physical form will be mailed to students electing the course.)
Students who complete course will receive a National Association of Underwater Instructors Diver Certificate.

MI 280 Marine Field Biology var-3sh
Prerequisites: None
An introduction to basic principles of ecology and natural history of selected plants and animals in terrestrial, freshwater, and marine environments. Suitable for non-Science majors.

MI 331 Chemical Oceanography var-3sh
Prerequisites: MI110 and one year of chemistry
Treatment of oceanic chemical phenomena by sampling and laboratory analysis techniques.

MI 342 Marine Botany var-3sh
In-the-field studies and laboratory analysis by instrumentation of marine and marine fringe plants in the Middle Atlantic Coast as exemplified by those found in the Cape Henlopen, Delaware, and Wallops Island, Virginia, areas

MI 343 Marine Ichthyology var-3sh
Prerequisites: General Biology and/or consent of the instructor
A study of fishes. Specimens collected along Eastern Seaboard by students will be used to illustrate anatomy, physiology, and systematics of this major vertebrate group. Field collections will give student opportunity to observe relationships of these animals to the biotic and physical environment.

MI 344 Anatomy of Marine Chordates var-3sh
Prerequisites: Six hours of biology including General Zoology
Designed to familiarize students with various aspects of marine chordates.

MI 345 Marine Ornithology var-3sh
Prerequisite: One year of biology or consent of the instructor
Introduces student to avian fauna of seacoast and enables comparison with inland species. In addition to field work providing visual and vocal identification, lecture material will include information on distribution, behavior, physiology, and anatomy of birds.

MI 362 Marine Geology var-3sh
Prerequisites: MI110 and physical geology or consent of instructor
Studies of structural and sedimentary environments of continental shelf, slopes, and ocean basins and crustal structure of the earth and its relation to sedimentary record and geologic history of oceans.

MI 364 Physical Oceanography var-3sh
Prerequisites: MI110, one year of physics, one semester of calculus, and permission of the instructor
Course includes consideration of physical properties, mass and energy budgets, theory of distribution of variables; cause, nature, measurement, analysis, and prediction of tides, currents, and waves; and basic instrumentation in the field.

MI 420 Marine Micropaleontology var-3sh
Prerequisites: One year of geology and biology or consent of instructor
Deals with modern, living representatives of microorganisms important in fossil record with particular emphasis placed on taxonomy, morphology, evolution, and ecologic affinities of representative groups.

MI 431 Ecology of Marine Plankton var-3sh
Prerequisite: One year of biology
Study of phytoplankton and zooplankton in marine and brackish environments. Qualitative and quantitative comparisons made between the planktonic populations of various types of habitats in relation to primary and secondary productivity

MI 459 Coastal Geomorphology var-3sh
Prerequisite: One year of geology
A study of coastal geomorphology with emphasis on Late Cenozoic and Pleistocene sea-level changes in response to worldwide continental glaciation. The student will participate in field studies of Pleistocene deposits and the weathering of these deposits

MI 481 Special Topics var-3sh
Prerequisite: Instructor consent
Topics vary from session to session.

MI 500 Problems in Marine Science var-3sh
Graduate students or undergraduate students with advanced standing registering for this course may elect either of the following options.

Option A: Take a 200, 300, or 400 level MI course and complete, in addition to regular course requirements, a project in the area under direction of instructor
Option B: Complete an independent research project. A research proposal must be approved by the Academic Committee of M.S.C. in advance of the time research is to be undertaken.

MK: Marketing
Department of Marketing
College of Business

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

MK 320 Principles of Marketing 3c-0l-3sh
Prerequisite: EC122
Study of those activities necessary to the design, pricing, promotion, and distribution of goods and services for use by organizations and ultimate consumers.

MK 321 Consumer Behavior 3c-0l-3sh
Prerequisites: MK320 and PC101
Survey of noteworthy contributions of behavioral science and research on consumer purchasing and decision-making process, with particular attention to formal and informal influence patterns.

MK 420 Marketing Management 3c-0l-3sh
Prerequisites: MK320 and MK321
Analysis of marketing and operational problems and policies involved in planning, organizing, coordinating, and controlling a total marketing program.

MK 421 Marketing Research 3c-0l-3sh
Prerequisites: MK320 and QB215
Nature, methods, analysis, and application of present-day marketing research techniques utilized in the solution of practical marketing problems.

MK 422 Seminar in Marketing 3c-0l-3sh
Prerequisites: MK420 and MK421, graduating senior
A terminal course designed for majors in marketing; considers current literature in the field, case problems pertaining to the total marketing effort, and current problems of actual companies.

MK 430 International Marketing 3c-0l-3sh
Prerequisite: MK320
International marketing and markets are analyzed. Special consideration is

given to the significance of government regulations; organization structures of export and import enterprises; and credit policies.

MK 431 Industrial Marketing 3c-0l-3sh
Prerequisite: MK420
Concerned with the major activities involved in the marketing of industrial goods and services, including the industrial marketing system, marketing information needs of the industrial firm, industrial marketing implementation and control, and channel, pricing, product, and promotional strategies for industrial goods.

MK 432 Business and Society 3c-0l-3sh
Overview of the interactions between business and the larger social system in which it operates. Considers the problems, solutions, and future directions of societal issues and their relationships to the business environment. Topics discussed include consumerism, the morality of advertising, self-regulation, pollution and ecology, overpopulation, government regulation, and the social and ethical responsibilities of business and industry. (Also offered as MG432; may not be taken for duplicate credit)

MK 433 Advertising 3c-0l-3sh
Prerequisite: MK320
Introduction to the principles, practices, and creations of advertising. Use of various media and legal, economic, social, and ethical aspects of advertising are also considered.

MK 434 Marketing Logistics 3c-0l-3sh
Prerequisites: Junior/senior standing, MK320 and MG330
The focus of this course is on the planning, organizing, and controlling the marketing logistics function. In addition to the acquisition and application of management science methods, students will integrate and apply previously gained knowledge to analyze and solve complex marketing logistics problems. Areas of major concentration include facility location, transportation, inventory management, and customer service

MK 481 Special Topics in Marketing 3c-0l-3sh
Covers advanced, innovative, or exploratory topics and disciplines within marketing. Specific content items developed by instructor. Credits may be applied to either required (by permission of departmental chairperson) or free electives in a student's program.

MK 482 Independent Study var-3sh
Prerequisite: Consent of departmental chairperson and dean, College of Business
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member.

MK 493 Marketing Internship var-3-12sh
Practical experience in the marketing field to develop knowledge and experience in the practical application of theory to actual problems in a nonclassroom situation. A maximum of 3sh of internship in the student's major may be applied toward the marketing major-area elective requirements. Additional internship credit must be used as free electives only. Admission only by permission of the department chairperson and the dean, College of Business.

MS: Military Science
Department of Military Science

MS 101 American Military History (1650-1920) 2c-1l-2sh
A study of the relationship and impact of warfare and military forces on the development of America. This includes the interaction of American military forces in war and peace on the social, economic, and technological development of the United States as well as a study of strategy, tactics, and personalities involved in major wars. Also, see Leadership Laboratory.

MS 102 American Military History (1920-Present) 2c-1l-2sh
A study of the modern evolution of American military institutions and policies and their relationship to society. Included will be studies of major wars, their strategy, and impact as well as the personalities involved. Also, see Leadership Laboratory.

MS 203 Fundamentals of Tactical Operations, Techniques of Leadership, and Weapons Characteristics 2c-1l-2sh
Organization, techniques, resources, and capabilities involved in conducting small-unit tactical operations. Emphasis is on leadership, organization, and management techniques needed to cause a group of people to accomplish specific objectives. Characteristics of military weapons systems are taught Students serve as leaders in Leadership Labs.

MS 204 National Security and Fundamentals of Military Topography 2c-1l-2sh
Study of national security concepts, policies, and the national decision-making process with emphasis on national resources, national will, and economic factors. Included will be a study of nuclear and conventional response options Fundamentals of military topography including the use of military maps to determine topographic features, to conduct land navigation, and to perform terrain analysis will be covered. Also, see Leadership Laboratory.

MS 305 Fundamentals of Leadership and Modern Learning/Teaching Relationship 3c-1l-3sh
Study in practical application of principles of leadership/management as applied in classroom and field to include case studies in psychological, physiological, and sociological factors which affect human behavior; individual and group solution of leadership problems common to small units. Also, see Leadership Laboratory.

MS 306 Study of Advance Leader Planning and Execution of Modern Combat Operations 3c-1l-3sh
Analysis of leader's role in directing and coordinating efforts of individuals and small units in execution of offensive and defensive tactical missions, to include command and control systems, the military team, and communications techniques. Also, see Leadership Laboratory.

MS 407 Management of the Military Complex to Include Fundamentals of Military and International Law 3c-1l-3sh
Study of the various managerial elements needed to effectively control a military organization and the techniques used to accomplish these functions. Studies in military law and international law prepare the students for their legal responsibilities. Also, see Leadership Laboratory

MS 408 Seminar in Military Analysis and Management 3c-1l-3sh
Contemporary analysis of use of military in world affairs to include importance of strategic mobility and neutralization of insurgent movements. Selected management problems and situations will be presented as they relate to military justice, administration, and obligation and responsibilities of an officer. Also, see Leadership Laboratory.

Leadership Laboratory (one afternoon per week) var-0sh
A practical experience designed for the attainment and application of leadership principles. Concurrently scheduled in conjunction with all Military Science courses, it provides for practical challenges in personal accomplishment, both physical and mental, and for development of team work and leadership.

Summer Camp var-0sh
Students attend a six-week summer camp upon completion of the first year of the Advanced Course. Time at camp is devoted to practical application of principles and theories taught during the preceding school year. While at camp, each student receives lodging, subsistence, uniforms, medical care, reimbursement for travel, and pay in amount of one-half pay of second lieutenant per month.

MT: Medical Technology
Allied Health Professions Programs
College of Health and Human Services

MT 494 Clinical Microbiology var-6-10sh
Identification and clinical pathology of bacteria, fungi, viruses, and parasites. Techniques to isolate, stain, culture, and determine antimicrobial susceptibility. Instrumentation; quality control.

MT 495 Clinical Chemistry var-7-10sh
Enzymology, endocrinology, biochemistry of lipids, carbohydrates and proteins, metabolism of nitrogenous end products, physiology and metabolism of fluids and electrolytes, and toxicology as related to the body and diseases. The technical procedures include colorimetry, spectrophometry, electrophoresis, chromatography, automation, and quality control.

MT 496 Clinical Hematology/Coagulation var-4-7sh
The composition and function of blood; diseases related to blood disorders; the role of platelets and coagulation. Manual and automated techniques of diagnostic tests for abnormalities.

MT 497 Clinical Immunohematology var-3-6sh
Blood antigens, antibodies, crossmatching, hemolytic diseases, and related diagnostic tests. An in-depth study of blood donor service and its many facets such as transfusions, medico-legal aspects, etc.

MT 498 Clinical Immunology/Serology var-2-4sh
Immune response, immunoglobulins, autoimmunity, and complement and related tests and diseases. Survey and demonstration of serological diagnostic tests

MT 499 Clinical Seminar var-0-6sh
Other courses which are not included in the above (such as orientation, laboratory management, education, clinical microscopy) and/or are unique to the individual hospital program.

MU: Music
Department of Music
College of Fine Arts

MU 111 Theory Skills I 0c-3l-2sh
Develops aural skills through dictation and interpretation of written music by sight-singing. Taken in conjunction with Theory I

MU 112 Theory Skills II 0c-3l-2sh
Prerequisite: MU111
Continuing development of aural skills and introduction of keyboard skills. Taken in conjunction with Theory II.

MU 115 Theory I 3c-0l-3sh
The study of the harmonic, melodic, and formal devices of the common practice period, from simple diatonic chords through secondary dominants.

MU 116 Theory II 3c-0l-3sh
Prerequisite: MU115
The study of the harmonic, melodic, and formal devices of the common practice period, from simple diatonic chords through secondary dominants. Theory II introduces basic music forms.

MU 120 Brass Ensemble 0c-2l-0/1sh

MU 121 Chamber Singers 0c-3l-0/1sh

MU 122 University Chorale 0c-3l-0/1sh

MU 123 Symphony Band 0c-3l-0/1sh

MU 125 Marching Band 0c-6l-0/1sh

MU 126 Music Theater 0c-6l-0/1sh

MU 127 Percussion Ensemble 0c-4l-0/1sh

MU 129 University Symphony Orchestra 0c-5l-0/1sh

MU 130 String Ensemble 0c-2l-0/1sh

MU 131 University Wind Ensemble 0c-3l-0/1sh

MU 133 Woodwind Ensemble 0c-2l-0/1sh

MU 134 University Chorus 0c-3l-0/1sh

MU 135 Advanced Jazz Ensemble 0c-3l-0/1sh

MU 136 Advanced Jazz Ensemble 0c-3l-0/1sh

MU 151 Class Voice I 1c-1l-1sh
Conceived for non-Voice majors. Development of correct vocal production techniques through individual and group performance in class. Use of the voice as a tool for theory skills and for eventual use in the music classroom.

MU 152 Class Voice II 1c-1l-1sh
Continuation of Class Voice I. Resumes development of correct vocal production techniques through performance.

MU 153 Class Piano I 1c-1l-1sh
Designed for students with no significant background in piano who need to develop functional keyboard skills. Emphasis placed on harmonizing melodies and playing simple accompaniments.

MU 154 Class Piano II 1c-1l-1sh
Continuation of Class Piano I.

MU 155 Class Strings I 1c-1l-1sh
For Music Education majors who will develop rudimentary playing techniques sufficient to initiate instruction for beginning students. Emphasis placed on correct playing positions and tone production for violin, viola, cello, and double bass.

MU 157 Class Percussion I 1c-1l-1sh
A practical introduction to the various instruments of the percussion family. Students will demonstrate correct playing techniques and develop a resource file containing information on percussion instruments and instructional materials as needed by the school music teacher.

MU 159 Class Brass I 1c-1l-1sh
For Music Education majors who will demonstrate rudimentary playing techniques and tone production skills to initiate beginning instruction. Students will develop playing on trumpet or French horn and trombone, euphonium, or tuba

MU 161 Class Woodwinds I 1c-1l-1sh
For Music Education majors who will acquire correct tone production and playing techniques sufficient to initiate beginning instruction. Students will demonstrate skills with flute, clarinet, saxophone, and oboe or bassoon.

MU 163 Class Guitar I 1c-1l-1sh
Designed for students with no significant background in guitar who wish to develop functional playing skills. Emphasis placed on using the guitar as an accompanying instrument.

MU 211 Theory Skills III 0c-3l-2sh
Prerequisites: MU111, 112
Further development of aural and keyboard skills. Taken in conjunction with Theory III

MU 212 Theory Skills IV 0c-3l-2sh
Prerequisites: MU111, 112, 211
Culmination of development in aural and keyboard skills. Taken in conjunction with Theory IV.

MU 213 Jazz Theory Skills I 0c-3l-2sh
Training in aural, vocal, and keyboard skills as they relate to the elements of jazz and improvisation. A high degree of emphasis is placed on ear training and its use in the transcription of live and recorded musical examples and on keyboard skills and their utilization in the development of an harmonic vocabulary.

MU 214 Jazz Theory Skills II 0c-3l-2sh
A continuation of work begun in Jazz Theory Skills I with emphasis on more advanced aural, vocal, and keyboard skills as they relate to jazz and improvisation.

MU 215 Theory III 3c-0l-3sh
Prerequisites: MU115, 116
Extension of the techniques of the 18th and 19th centuries to include modulation, altered chords, more advanced musical forms, and contrapuntal procedures.

MU 216 Theory IV 3c-0l-3sh
Prerequisites: MU115, 116, 215
Extension of the techniques of the 18th and 19th centuries to include modulation, altered chords, more advanced musical forms, and contrapuntal procedures. Theory IV concentrates largely on music and materials of the present century.

MU 217 Keyboard Harmony I 1c-1l-1sh
Prerequisite: Nominal facility at keyboard
Designed to develop keyboard skills so the student may realize and produce in sound basic harmonic progressions

MU 218 Keyboard Harmony II 1c-1l-1sh
Prerequisite: MU217
Continuation of Keyboard Harmony I, involving chromatic harmony and more complex progressions.

MU 222 Jazz Theory I 3c-0l-3sh
The study of the elements of music, melody, harmony, rhythm, and form, as they are found in jazz improvisation. Includes an introduction to the fundamentals of jazz improvisation through aural and written analysis, composition, and performance.

MU 223 Jazz Theory II 3c-0l-3sh
A continuation of the work begun in Jazz Theory I with emphasis on extending the harmonic, melodic, and rhythmic vocabulary. Includes analysis of differing trends in jazz, imitation of a variety of styles, and the cultivation of an individualized approach to jazz analysis, composition, and improvisation

MU 224 Jazz Improvisation Techniques I 3c-0l-3sh
A study of the basic materials and practices for improvising or extemporaneous playing.

MU 225 Jazz Improvisation Techniques II 3c-0l-3sh
A continuation of the basic materials and practices for improvising or extemporaneous playing. Makes use of more complicated and involved harmonic progressions utilizing extended choral harmonies.

MU 304 Form and Analysis I 2c-0l-2sh
Prerequisite: MU216
Thorough study of smaller forms of music

MU 306 Counterpoint I 2c-0l-2sh
Prerequisite: MU216
After study and analysis of the style of 16th-century contrapuntal writing, student will do original writing using techniques and devices of period. As time permits, same approach will be made to explore style of 17th- and 18th-century composers

MU 309 Orchestration I 2c-0l-2sh
Prerequisite: MU216
All instruments of orchestra are studied from the viewpoint of their contribution to the total sound of ensemble. Ranges and timbres are considered, as well as actual arranging of selected music.

MU 311 Fundamentals of Conducting 3c-0l-2sh
Emphasis placed on fundamental physical skills of conducting process; various beat patterns are mastered and elementary score reading and interpretation are considered.

MU 312 Choral Conducting 3c-0l-2sh
Prerequisite: MU311
Provides an opportunity for the student to apply basic conducting techniques to choral music. Each student conducts the class in standard choral works. Includes survey of suitable literature, organizational problems, voice testing, rehearsal techniques, program building, interpretation, and diction.

MU 313 Instrumental Conducting 3c-0l-2sh
Prerequisite: MU311
Provides the student with an opportunity to apply basic conducting skills to various instrumental ensembles. Includes survey of suitable literature, organizational problems, audition procedures, rehearsal techniques, program building, and interpretation.

MU 315 Theory V 3c-0l-3sh
Prerequisite: MU216
Many of harmonic idioms of past half-century are considered, such as comparative analysis of dissonance; polytonality, polyrhythms; atonalism and 12-tone system; and microtonalism. Original writing in these styles required.

MU 331 Elementary Methods 3c-0l-3sh
Includes analytical study of texts, recordings, equipment, instruments, and other materials suitable to musical development of elementary pupils; proper treatment of child voice; selection, use, and teaching of rote songs; rhythmic activities and development, music reading; part singing; planning and organization; guided observations; and evaluation techniques.

MU 333 Secondary Methods 3c-0l-3sh
Includes General Music Class, choral organizations, changing voice, techniques of instruction, including team teaching and programmed learning, high school theory courses, high school music literature courses, scheduling, administrative problems, curriculum development, evaluation of materials and equipment, evaluative techniques, and guided observation. Extra laboratory sessions are required.

MU 335 Music for the Exceptional Student 2c-2l-2sh
Develops music education skills, techniques, and materials for the emotionally, mentally, physically, or neurologically handicapped student and the gifted. Designed for students in music education, special education, and elementary education.

MU 351 Italian Diction and Literature 2c-0l-2sh
For first-semester voice majors, this class meets for two hours per week. Emphasis is on pronunciation for the stage and readings of Italian song texts. Italian madrigals, solo song literature, and operatic repertoire are also studied.

MU 353 French Diction and Literature 2c-0l-2sh
For third- or fourth-semester voice majors, this class meets for two hours per week. Emphasis is on pronunciation for the stage and the International Phonetic Alphabet. French solo song literature and operatic repertoire are also studied

MU 354 German Diction and Literature 2c-0l-2sh
For second-semester voice majors, this class meets for two hours per week. Emphasis is on pronunciation for the stage. German solo song literature as well as Bach chorales are studied.

MU 405 Piano Pedagogy 3c-0l-3sh
Prerequisites: Junior standing in Piano and a piano major or minor
Survey of current and significant past developments in teaching of piano, both privately and in small and large classes. The various piano methods are analyzed, compared, criticized, and adapted to each individual's use.

MU 406 Voice Pedagogy 3c-0l-3sh
Prerequisites: A voice major or minor and permission of the instructor
Survey of current and past development in teaching of voice, both privately and in small and large classes. The various vocal methods are analyzed, compared, criticized, and adapted to each individual's use.

MU 408 Marching Band Techniques 2c-0l-2sh
Considers building a band show; alignment of ranks and files; development of a standard pace of 5 to 5 and 8 to 5; selection of music; instrumentation; techniques of developing morale; and fundamentals of uniform design.

MU 411 Composition I 2c-0l-2sh
Prerequisite: MU216
Instruction is individualized. Compositional devices studied through analysis of works by major composers. Students will write several original compositions utilizing smaller forms.

MU 412 Composition II 2c-0l-2sh
Prerequisite: MU411
Continuation of Composition I.

MU 413 Composition III 2c-0l-2sh
Prerequisite: MU412
Students will write several original compositions utilizing larger forms.

MU 414 Composition IV 2c-0l-2sh
Prerequisite: MU413
Continuation of Composition III. Outstanding works will be programmed by university performing ensembles.

MU 475 Music Lab var-0sh
All music majors must attend eight recitals per semester and all departmental recitals, as well as all recitals for their respective performance areas.

MU 481 Special Topics in Music 3c-0l-3sh
May provide an in-depth study of a narrowly defined area of the discipline. Subject matter will change with repeated offering of the course. May be repeated for credit.

MU 482 Independent Study var-1-6sh
Opportunity to pursue special interests beyond the scope of regular class offerings. Permission of instructor and approval of department chairperson are required.

MU 493 Internship in Music var-1-6sh
Designed for music majors who wish to receive practical experience working with people in music or in areas related to music.

NU: Nursing
Department of Nursing
College of Health and Human Services

NU 280 Introduction to Nursing 3c-0l-3sh
Prerequisite: Nursing majors only
Introduces the major concepts of concern to nursing: persons in their environments, health, and the profession of nursing. Topics include the nurse's role as provider of care and member of a profession, the nursing process as the mode of practice; the value of research as a basis for nursing practice; biophysical and psychosocial components of wellness.

NU 285 Introduction to Clinical 0c-9l-3sh
Prerequisite: Nursing majors only
A clinical and college laboratory course which provides the opportunity to practice the use of the nursing process. Emphasis is placed on assessment and basic intervention skills.

NU 300 Nursing Seminar I 1c-0l-1sh
Prerequisites: NU280, NU285
A seminar which provides a forum for the exploration and discussion of historical, ethical, legal, social, and political issues which affect nursing and health care. Emphasis is placed on the development of professional values, critical thinking, decision making, and communication skills.

NU 302 Core II 2c-0l-2sh
Prerequisite: NU280
Emphasizes the involvement of nurses and nursing in selected aspects of wellness promotion and maintenance. The theory base for the use of the nursing process to support individuals and families through maturational change and the childbearing cycle is presented.

NU 303 Clinical Laboratory I 0c-14l-5sh
Prerequisites: NU280, NU285
A clinical laboratory course which enables the student to care for individuals and families across the life span. Guided experiences are provided in hospital and community-based facilities. The nursing process is utilized to promote and maintain wellness in individuals within families.

NU 304 Core III 2c-0l-2sh
Prerequisite: NU302
Emphasizes the involvement of nurses and nursing in selected aspects of wellness, promotion, maintenance, and restoration. The theory base for the use of the nursing process is expanded to include family, community health, and transcultural nursing concepts.

NU 305 Clinical Laboratory II 0c-14l-5sh
Prerequisite: NU303
A clinical laboratory course which enables the student to provide care to individuals and families with acute and chronic health problems across the life span. Guided experiences are provided in hospital and community-based facilities and individuals' homes. The nursing process is utilized to promote, maintain, and restore optimal wellness in individuals within families.

NU 310 Nursing Seminar II 1c-0l-1sh
Prerequisite: NU300
A seminar which provides a forum for the exploration and discussion of historical, ethical, legal, social, and political issues which affect nursing and health care. Emphasis is placed on the development of professional values, critical thinking, decision making, and communication skills.

NU 322 Maintenance and Restoration of Wellness I 3c-0l-3sh
Prerequisites: NU280, NU285
Introduces pathophysiologic change in individuals across the life span and associated nursing management. Topics include caring for the individual who requires surgery or whose alteration in health is related to problems in oxygenation, nutrition, and fluid and electrolyte balance.

NU 323 Maintenance and Restoration of Wellness II 3c-0l-3sh
Prerequisite: NU322
Physiologic and psychologic pathology in individuals across the life span and associated nursing management. Topics include caring for the individual whose alteration in health is related to problems with reproductive, cognitive-perceptual, motor, metabolic, and elimination function.

NU 400 Nursing Seminar III 1c-0l-1sh
Prerequisite: NU310
A seminar which provides a forum for the exploration and discussion of historical, ethical, legal, social, and political issues which affect nursing and health care. Emphasis is placed on the development of professional values, critical thinking, decision making, and communication skills.

NU 402 Core IV 2c-0l-2sh
Prerequisite: NU304
Emphasizes the nurse's roles as accountable provider and coordinator of care and member of a profession. The specific issues that are addressed are quality assurance in provision of patient care; rights and responsibilities of the individual, the nurse as an employee, and the employer; current environmental health concepts.

NU 403 Clinical Laboratory III 0c-14l-5sh
Prerequisite: NU305
A clinical laboratory course which affords the opportunity to apply the nursing process as provider and coordinator of care with individuals and families experiencing complex health care needs in a variety of health care facilities.

NU 404 Core V 2c-0l-2sh
Prerequisite: NU402
Emphasizes the nurse's roles as provider and coordinator of care in health care facilities and in emergency and disaster situations. Concepts and principles related to the management of the health care team, community health, and rehabilitation are addressed.

NU 405 Clinical Laboratory IV 0c-14l-5sh
Prerequisite: NU403
A clinical laboratory course which affords the opportunity for the application of critical thinking, health teaching, and management skills. Emphasizes development of the caregiver role in selected areas of clinical practice; development of the care provider and coordinator roles in inpatient and community settings with individuals and families experiencing complex health care needs; integration of the roles of provider and coordinator of care and member of a profession.

NU 410 Nursing Seminar IV 1c-0l-1sh
Prerequisite: NU400
A seminar course which provides a forum for the exploration and discussion of historical, ethical, legal, social, and political issues which affect nursing and health care. Emphasis is placed on the development of professional values, critical thinking, decision making, and communication skills.

NU 422 Maintenance and Restoration of Wellness III 3c-0l-3sh
Prerequisite: NU323
Emphasizes pathophysiology and psychopathology for understanding the complex process of the individual's adaptation to crisis. The theory base for the application of the nursing process in the care of individuals requiring hospitalization, life-sustaining treatment, intensive monitoring, and crisis intervention is discussed.

NU 423 Maintenance and Restoration of Wellness IV 3c-0l-3sh
Prerequisite: NU422
Emphasizes strategies used in assisting individuals and their families in the promotion, maintenance, and restoration of optimal wellness. The theory base for the application of the nursing process when illness is being managed in acute, long-term care, and community settings is discussed.

NU 430 Nursing Research 3c-0l-3sh
Prerequisite: MA217

Focus on evaluating research through a study of research design, methodologies, sampling, data analysis, and significance of findings. Consideration is given to issues in conducting research and the impact on problems investigated, the nurse researcher, and the consumer of research.

OS: Office Systems
Department of Office Systems and Business Education
College of Business

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

OS 301 Advanced Microcomputer Applications 3c-0l-3sh
Prerequisite: BE/CO/IM 101, or permission of instructor
Advanced applications of microcomputing software from the user perspective to enhance productivity of office employees, executive and managerial, professional, and support personnel. Comparative and evaluative techniques for appropriate selection and implementation of software. Word processing, spreadsheet, database, desktop publishing, utility, and operating system software will be emphasized. (Formerly BE274 Information Processing Applications)

OS 312 Administrative Office Services 3c-0l-3sh
Presentation of fundamental principles and practices used in the development of an office. Specialized areas such as systems analysis, work simplification, forms design, information processing, office machines and equipment, records management, office design and layout, office location and physical environment, office supervision, office manuals, and development of office personnel will be discussed. (Offered as AD412 prior to 1992)

OS 313 Office Systems Technologies 3c-0l-3sh
Prerequisite: Junior standing
Emphasis on systems hardware, especially the microcomputer. Concepts and design principles common to all microprocessors are studied. Auxiliary hardware, such as reprographics, printers, modems, scanners, and laser technology will be included. (Formerly OS413 Information Processing Technology)

OS 315 Records Administration 3c-0l-3sh
Development of the principles of records administration including creation, use, maintenance, and destruction. Storage facilities, records classification, forms analysis, and control of records, as well as micromage systems will be discussed. [Offered as AD415 prior to Summer, 1991, and as OS415 during 1991-92]

OS 400 Telecommunications 3c-0l-3sh
Prerequisite: Junior standing
Knowledge and concepts of telecommunications technology, applications, and management as they apply to office systems.

OS 430 Office Systems 3c-0l-3sh
Prerequisites: IM300, OS312, OS413
Emphasis on the solving of office management problems. Provides an opportunity to integrate and apply the skills and knowledge previously gained in the Office Systems major. [Offered as AD430 prior to Summer, 1991]

OS 482 Independent Study in Administrative Services, Business Education, or Distributive Education var-3sh
Prerequisite: Consent of departmental chairperson and dean, College of Business
(Offered as AD482 prior to 1993-4)

OS 493 Internship in Office Systems var-6sh
Prerequisites: Approval of internship coordinator, chairperson, and dean and 2.75 overall GPA and 3.0 GPA in Business
A supervised office experience program with an approved agency (business, industry, and government); includes three two-hour, on-campus seminars.

PC: Psychology
Department of Psychology
College of Natural Sciences and Mathematics

PC 101 General Psychology 3c-0l-3sh
An introduction to the scientific study of behavior and mental processes

PC 280 Psychological Inquiry 3c-0l-3sh
Prerequisites: PC101, Psychology minors
Intended to introduce students minoring in Psychology to issues central to carrying out and interpreting empirical research in the field. Students will become more sophisticated consumers of empirical research findings. Students who have successfully completed PC290 are not permitted to take this course for credit

PC 290 Research Design and Analysis I 3c-2l-4sh
Prerequisites: PC101, MA217
A laboratory course devoted to designing, conducting, and evaluating results of psychological experiments.

PC 291 Research Design and Analysis II 3c-2l-4sh
Prerequisites: PC101, "C" or better in PC290
A continuation of Research Design and Analysis I.

PC 310 Developmental Psychology 3c-0l-3sh
Prerequisite: PC101
Comprehensive study of all factors that contribute to human development from conception to death, particularly as they relate to psychological development of individual. A survey course directed at students not planning to take PC311, 312, or 373. Credit toward a major or minor in psychology will not be given for both PC310 and PC311

PC 311 Child Psychology 3c-0l-3sh
Prerequisite: PC101
Study of factors that influence total development and behavior of child. Current theories and research are considered, with focus upon optimum development of individual. Credit toward a major or minor in psychology will not be given for both PC310 and 311

PC 312 Adult Development and Aging 3c-0l-3sh
Prerequisite: PC101
A survey of physiological, cognitive, emotional, and social issues affecting the young adult, the middle-aged, and the elderly. Includes an examination of significant adult life crises.

PC 320 Personality 3c-0l-3sh
Prerequisite: PC101
Provides comparative analysis of major representative traditional and contemporary theories of personality.

PC 321 Abnormal Psychology 3c-0l-3sh
Prerequisite: PC101
The description, causes, and treatment of behaviors labeled abnormal in our society are studied from experimental and clinical points of view.

PC 322 Introduction to Psychological Measurement 3c-0l-3sh
Prerequisites: PC101, MA217
Survey of psychological measurement techniques, with emphasis on theoretical assumptions underlying these techniques and discussion of interpretation and limitations of measuring instruments.

PC 330 Social Psychology 3c-0l-3sh
Prerequisite: PC101
The study of the effects of the social environment on human behavior. Topics include perception of person, attitude formation and change, and small group interaction.

PC 331 Environmental Psychology 3c-0l-3sh
Prerequisite: PC101
The study of the relationship between human behavior and its environmental context. Emphasis on the physical environment, both natural and built.

PC 340 Human Cognition: Perception 3c-2l-4sh
Prerequisites: PC101, 290

Study of pereceptual process. Sensory mechanisms for processing information are examined, as well as responses to complex stimuli

PC 341 Conditioning and Learning 3c-2l-4sh
Prerequisites: PC101, 290
Examination of the basic principles of learning and related phenomena; discussion of classical conditioning, discrimination learning, and aversive control of behavior.

PC 342 Human Cognition: Memory and Thinking 3c-2l-4sh
Prerequisites: PC101, 290
Study of methods and findings in areas of human memory and human information processing.

PC 350 Physiological Psychology 3c-2l-4sh
Prerequisites: PC101, 290
Study of the relationship between behavior and the anatomy and physiology of the nervous system.

PC 352 Ethology and Comparative Psychology 3c-2l-4sh
Prerequisites: PC101, 290
Comparative survey of animal behavior and its control mechanisms including sensory and physiological systems, reproduction and parenting, social behavior, and the role of learning in various animal species. Emphasis is on the relationship of the animal to its environment

PC 370 Consciousness 3c-0l-3sh
Prerequisites: PC101, junior standing
Examines psychological research on awareness, attention, brain neurotransmitters, brain laterality, sleep, dreams, and hypnosis.

PC 371 Human Motivation 3c-0l-3sh
Prerequisite: PC101
Systematic study of how behavior is initiated, sustained, directed, and terminated. Current theories in this area are critically reviewed.

PC 372 Drugs and Behavior 3c-0l-3sh
Prerequisites: PC101 and junior standing or permission
Survey of the current knowledge concerning the actions of drugs. Topics will include legal and social issues surrounding drug use, hazard potential of commonly used drugs, review of current theories and issues regarding the use of drugs in psychotherapy, and consideration of treatment approaches for addiction.

PC 373 Adolescent Psychology 3c-0l-3sh
Prerequisite: PC101
Study of the adolescent and the adolescent's world, especially the physical aspects of adolescence, psychological growth patterns, social pressures, and adaptation.

PC 374 Stress and Coping 3c-0l-3sh
Prerequisite: PC101
Fundamental concepts and findings in stress and stress-related disorders. Relationships of stress to disease and methods for coping with stress are presented

PC 375 Mass Media and Behavior 3c-0l-3sh
Prerequisites: PC 101 and junior or senior status
Theory and research on the influence of the mass media on human behavior and attitudes. Topics include: the effects of news and political advertising on public opinion; the effects of racist and sexist portrayals; and the effects of violence and pornography on aggressive behavior. [Also offered as CM 375; may not be taken for duplicate credit]

PC 376 Psychology of Health Behavior 3c-0l-3sh
Prerequisite: PC 101
An examination of the role of behavior factors in health status with a strong focus on preventive health behaviors and the role of the psychologist in promotion of health-related behavioral changes.

PC 378 Psychology of Death and Dying 3c-0l-3sh
Prerequisite: PC101
Theories and research which delineate the psychological factors affecting the dying person as well as those persons close to one who is dying are discussed.

PC 379 Psychology of Human Sexuality 3c-0l-3sh
Prerequisite: PC101
Provides an overview of the psychological issues and research relevant to sexuality with an emphasis on gender roles. Social, psychological, and gender perspectives are used to examine a number of topics, including contemporary sexual attitudes, sexual response, sexual relationships, sexual dysfunction, sexual variations, sexual preference, and sexual violence. Research pertaining to each topic is presented. Students are encouraged to critically evaluate research and theory and to make connections between the material and their personal experience.

PC 410 Historical Trends in Psychology 3c-0l-3sh
Prerequisite: PC101, junior or senior standing or permission
Comprehensive overview of historical antecedents of contemporary psychology with emphasis on their implications for future developments in the field

PC 411 Psychology of Women 3c-0l-3sh
Prerequisites: PC101, junior or senior standing or permission of the instructor
A critical examination of the assumptions about women which are held by the discipline of psychology, considering both current research and individual experience. The psychological effects of socialization on sex role identity, achievement, interpersonal power, mental health, and critical incidents in female development are discussed in the context of relevant concepts from developmental and social psychology

PC 420 Psychology of Organizations 3c-0l-3sh
Prerequisites: PC101, MA217
The study of psychological principles in an organizational setting; application of psychological principles to individual behavior and experience in organizations

PC 421 Psychology of Work 3c-0l-3sh
Prerequisite: PC291
The analysis, measurement, prediction, and development of human aptitude, ability, and performance in work and employment situations.

PC 424 Planned Organizational Change 3c-0l-3sh
Prerequisite: PC420
Provides instruction and experience in the theories and techniques involved in changing organizational activities and practices. Discussions of theories will be combined with a variety of group exercises.

PC 450 Introduction to Clinical Psychology 3c-0l-3sh
Prerequisites: PC101, 320, 321, and permission of instructor
Overview of clinical psychology, with emphasis upon clinician's use of methods of evaluation, and treatment and modification of behavior.

PC 480 Honors Seminar in Psychology 3c-0l-3sh
A seminar in the graduate tradition with a specialized topic. May be taken more than once to a maximum of 6sh

PC 481 Special Topics in Psychology var-1-3sh
Prerequisites: PC101 and department consent
A seminar providing study of selected topics not emphasized in other courses. May be taken more than once to a maximum of 6sh.

PC 482 Independent Study in Psychology var-1-3sh
Prerequisites: PC101 and department consent
Individual students pursue their particular interests in psychology in consultation with a member of the staff. May be taken more than once to a maximum of 6sh

PC 493 Psychological Practicum var-1-12sh
Prerequisites: PC101 and department consent
Under supervision of psychology department, selected students receive experience in application of psychological techniques. May be taken more than once to a maximum of 12sh

PH: Philosophy
Department of Philosophy and Religious Studies
College of Humanities and Social Sciences

PH 101 General Logic: Methods of Critical Thinking 3c-0l-3sh
Designed to develop students' ability to critically analyze deductive and

inductive argumentation, rhetoric, and persuasion, by examples drawn from media, textbooks, advertising, scholarly works, personal contacts, etc.

PH 120 Introduction to Philosophy 3c-0l-3sh
Designed to acquaint the beginning student with philosophical problems and methods in such areas as metaphysics, epistemology, logic, and value theory.

PH 221 Symbolic Logic I 3c-0l-3sh
An introduction to fundamental concepts in deductive logic with an emphasis on teaching students the basis of clear logical thought. Some of the historical origins of logical theory are explored. Students learn to symbolize arguments in the truth-functional logic and the predicate logic. Ways of testing arguments for validity as well as proofs are covered, with a stressing of application to actual arguments drawn from numerous sources in the media, philosophical issues, and moral problems.

PH 222 Ethics 3c-0l-3sh
An investigation of efforts to rationally justify moral judgment. Deals with fundamental issues such as: What is morality? Are moral notions cultural, rational, divine, or innate in origin? Are they relative or absolute? Are they freely chosen or determined by genetics and/or environment? Covers a variety of ethical theories significant both historically and contemporarily and applies those theories to current issues which involve moral dilemmas.

PH 223 Philosophy of Art 3c-0l-3sh
The course investigates some of the major problems in the philosophy of art, e.g., the nature of beauty and the aesthetic experience, the ethics and politics of art, creativity, the nature of the work of art and aesthetic objects, the concept of fine art, and the evaluation of works of art and aesthetic objects.

PH 232 Philosophical Perspectives on Love, Marriage, and Divorce 3c-0l-3sh
Examines the philosophical foundations of contemporary Western institutions and ideologies of romantic love. Considers major positions in both the history of philosophy and contemporary philosophy. Investigates the concepts, problems, and philosophical theories central to understanding romantic love, marriage, and divorce.

PH 321 Symbolic Logic II 3c-0l-3sh
Prerequisite: PH221 or permission of instructor
A continuation of Symbolic Logic I designed to enable students to evaluate consistency of statements, validity of arguments, soundness and completeness of formal systems. Focus on quantificational calculus and inductive logic.

PH 323 Political Philosophy 3c-0l-3sh
An inquiry into the philosophical concepts underlying the major political theories from ancient Greece to the modern era. Emphasis will be placed on major authors and texts to demonstrate a continuum of ideas and their modifications, replacement, and revival, as well as novel political ideas. Possible topics: commonality; peace; internationalism; sovereignty; nature of the state; law; the ruler; cosmopolitanism; nationalism; social contract; liberty; obligation; property; racism; sexism; slavery.

PH 324 History of Philosophy I: Ancient and Medieval 3c-0l-3sh
Western philosophy of pre-Socratic, classical Greek, Roman, and medieval periods. Special attention given to Plato, Aristotle, Augustine, and Aquinas, as well as the philosophic schools.

PH 325 History of Philosophy II: Renaissance and Modern 3c-0l-3sh
Continuation of PH324, beginning with 15th-century Renaissance thought and ending with the 19th-century precursors of contemporary philosophies.

PH 326 Phenomenology and Existentialism 3c-0l-3sh
A study of the phenomenological method as developed by Edmund Husserl and of the subsequent phenomenological movement as exemplified in the works of such representative figures as Heidegger, Merleau-Ponty, and Paul Ricoeur and of existentialism both as an independent movement of thought and as influenced by phenomenology and as exemplified in the works of such representative figures as Kierkegaard, Jaspers, Marcel, Buber, and Sartre.

PH 329 Philosophy of Religion 3c-0l-3sh
This course is a philosophical critical examination of religion to include: the nature of religion; religious argumentation; existence and nature of God; meaning and relation of faith and knowledge; theories of origin of religion.

PH 330 Philosophy of Science 3c-0l-3sh
An investigation into the nature of formal and empirical sciences; structure of scientific thought and its dependence upon or independence of theory; the logical and metaphysical status of scientific "laws" and theoretical concepts; reductionism in science; the concept of causality; the logic of explanation; problems in confirmation theory; science and value. No special background required. Recommended for math and science majors.

PH 400 Ethics and Public Policy 3c-0l-3sh
An analysis of the ethical dimension of public policies. Provides a general understanding of ethical theories, then focuses on their application to specific policy issues. Topics will vary from semester to semester. See current schedule of classes.

PH 405 Justice and Human Rights 3c-0l-3sh
An introduction to theories of justice and an analysis of the concept of human rights which is central to a just society and to much moral, political, and legal dispute. This course will explore relevant major positions in the history of philosophy, but its major focus is contemporary and raises issues such as women's rights, black rights, animal and environmental rights, welfare rights, and rights to life (or death).

PH 410 Contemporary Philosophy 3c-0l-3sh
Survey in depth of 20th-century Western positions such as pragmatism, logical positivism, logical and linguistic analysis, existentialism, and phenomenology.

PH 420 Metaphysics 3c-0l-3sh
A study of the nature of reality in general and of the main categories through which it is understood. The main topic areas of metaphysics concern: the one and the many; the relation of thought and being; the problem of universals; nominalism; realism; idealism; the nature of being, substance, essence, space, time, eternity, matter, mind, determinism and indeterminism.

PH 421 Theory of Knowledge 3c-0l-3sh
Investigation into problems involved in knowledge and justification and a consideration of methods suggested for their resolution. Particular attention is paid to issues such as knowledge, justification, certainty, objectivity, perception, and truth.

PH 450 Philosophy of Law 3c-0l-3sh
An examination of the nature of law and its relationship to such questions as morality, obligation, judicial review, justice, rights, punishment, liberty. The course combines philosophical theory with consideration of selected court cases to develop a philosophical and legal understanding of law and its place in society.

PH 460 Philosophy of Language 3c-0l-3sh
An investigation of issues in the philosophy of language and related issues in linguistics (including anthropological linguistics, sociolinguistics, and psycholinguistics). Topics include, for example, the influence of language on perception, rationalist/empiricist perspectives on language acquisition, language and political control, reference, meaning, and truth.

PH 481 Special Topics 3c-0l-3sh
Topical courses which will vary from semester to semester. See current schedule of classes.

PH 482 Independent Study var-1-6sh
Individual students wishing to pursue philosophical interests not covered in the department's regular offering may do so by seeking approval for independent study. Make inquiry of the chairperson. Upon approval, students are guaranteed at least five hours of faculty time per credit. All programs of study must be accepted by the department as a whole. May be taken more than once to a maximum of 6sh. (This option is available to both philosophy majors and nonmajors.)

PH 482 Independent Study: Honors Project 3c-0l-3sh
Prerequisites: 3.00 QPA, 15sh in Philosophy, and 3.20 average in departmental courses
Majors in Philosophy are invited to take 3sh of independent study designated "Honors Project." Upon satisfactory completion, graduation with departmental honors is possible.

PH 493 Internship in Philosophy var-3-6sh
Prerequisites: Permission of the department, junior or senior PH major or double major, 2.5 QPA

A supervised experience of no longer than one semester and no less than five weeks. This would take place in either a public or private organization in areas that either extend and develop or complement coursework in Philosophy. Log and/or major paper required. Internships are to be done with a clear analysis, argumentation, and examination of governing principles.

PS: Political Science
Department of Political Science
College of Humanities and Social Sciences

PS 101 World Politics 3c-0l-3sh
Analysis of contemporary (post-1945) state system and forces shaping the world in which we live. Student is given a framework within which to analyze contemporary international politics.

PS 111 American Politics 3c-0l-3sh
Introduction to American national government and politics, emphasizing Constitution, party system, Congress, Presidency, courts, and problems in national-state relations, civil rights, foreign policy, and social and economic policies.

PS 250 Public Policy 3c-0l-3sh
Emphasizes dynamics of government as they are evidenced in public opinion, pressure groups, political parties, and our governmental institutions; attention also directed toward the political-economical nexus within American society.

PS 251 State and Local Political Systems 3c-0l-3sh
Institutions and processes of state and local governments, with special attention to Pennsylvania; emphasis on the nature of federalism, state constitutions, and role of state and local government in an urban society.

PS 280 Comparative Government I: Western Political Systems 3c-0l-3sh
Analyzes Western political systems with emphasis upon major contemporary democratic governments of Europe. Analyzes and compares their political cultures, political institutions, and political processes.

PS 282 International Relations 3c-0l-3sh
Provides a conceptual framework for understanding sovereignty, nationalism, power, security, dispute settlement, and diplomatic, legal, economic, and military relations of nation-states. (Offered as PS281 prior to June, 1991)

PS 283 American Foreign Policy 3c-0l-3sh
Examines formulation and execution of American foreign policy, with attention to governmental institutions, mass media, interest groups, and public opinion; emphasizes contemporary problems.

PS 285 Comparative Government II: Non-Western Political Systems 3c-0l-3sh
Analyzes major non-Western political systems with emphasis upon authoritarian and totalitarian systems. Analyzes and compares in a systematic manner their political cultures, political institutions, and political processes.

PS 300 Research Methods in Political Science 3c-0l-3sh
Prerequisite: PS101 or PS111
An examination of the application of the scientific approach to the investigation of social and political phenomena. Concentrates on approaches, methods, and computer tools. All political science majors and minors are strongly urged to enroll.

PS 320 International Law 3c-0l-3sh
Prerequisites: PS101, PS281, or permission of instructor
Study of the development, nature, and function of international law, including recent trends.

PS 321 International Organizations 3c-0l-3sh
Prerequisites: PS101, PS281, or permission of instructor
Inquiry into purposes, structures, and actions of contemporary international political organizations, such as United Nations, regional, and functional organizations.

PS 346 Political Sociology 3c-0l-3sh
Prerequisites: PS111, SO151
Examines (a) who controls the state and state policy, (b) the role the state plays in stabilizing capitalism and protecting the power of the upper class, (c) the political activities of the middle and upper class, (d) labor, civil rights, and welfare rights, and social movements in America. Cross-listed in Sociology as SO458: Political Sociology.

PS 350 The Presidency 3c-0l-3sh
Examination of the Office of President, with attention to constitutional foundations, evolution, structure, powers, and functions; some comparisons between presidential and parliamentary systems and between offices of President and Governor.

PS 351 Legislative Process 3c-0l-3sh
Functional study of legislative bodies and process of legislation, covering organization of legislative assemblies, operation of committee system, procedures, bill drafting, aides, and controls over legislation.

PS 353 American Political Parties 3c-0l-3sh
The role of people, parties, and pressure groups in politics of American democracy; attention to sectional and historical roots of national politics, voting behavior, pressure group analysis, and campaign activities.

PS 354 Metropolitan Problems 3c-0l-3sh
Analyzes multiplicity of problems facing our metropolitan areas. Contemporary developments such as urban renewal, shrinking tax base, federal aid to cities, subsidized mass transit, municipal authorities, and political consolidation are examined.

PS 355 Intergovernmental Relations 3c-0l-3sh
Explores characteristics of federal systems of government, with emphasis on theories, origins, institutions, problems in intergovernmental relations in the United States, federal systems in other nations, and trends.

PS 356 Mass Media in American Politics 3c-0l-3sh
Variant theories of the symbolic relationship between American politics and the press are examined in the light of the American colonial-national experience. The special constitutional rights given to the media are explored, with particular attention to radio-TV.

PS 358 Judicial Process 3c-0l-3sh
Prerequisite: PS111
Explores nature and limits of judicial power, courts as policymaking bodies, selection of judges, decision process, external forces impinging on the courts, and role of Supreme Court in its relationship with Congress, the Presidency, and federalism.

PS 359 Constitutional Law and Civil Liberties 3c-0l-3sh
Prerequisite: PS111
Study of civil liberties and civil rights issues through leading Supreme Court decisions; topics treated include First Amendment rights, procedural due process and the Bill of Rights, and Equal Protection problems in civil rights.

PS 360 Classical Political Thought 3c-0l-3sh
Restriction: Not for credit after PH323
The origins and development of Western thought from Plato and Aristotle through Cicero and Saint Aquinas. The focus is especially on political participation as a way of life, the unity of political and moral conceptions in premodern political thought, and the relationship between order and justice.

PS 361 Modern Political Thought 3c-0l-3sh
Covers the major representatives of modern political thought since the Renaissance. Follows the development of the specifically modern notion of the state and political action through the works of Machiavelli, Hobbes, Locke, Rousseau, Marx, and Lenin. Emphasis on the "instrumentalist" state and the idea of a political science.

PS 362 American Political Thought 3c-0l-3sh
Covers a variety of American political ideas from the Puritans through recent radical and conservative critiques of American liberal democracy. Focus on the continuing development of the idea of individual rights, the political theory of the Constitution, and the tension between classical liberalism and popular rule.

PS 370 Introduction to Public Administration 3c-0l-3sh
Theories of organization and structural organization, personnel processes, executive functions, financial administration, the politics of administration, public relations, and problems of democratic control of bureaucracy.

PS 371 Issues in Public Administration 3c-0l-3sh
Intensive study of the role of federal agencies and their administrators in determining and developing public policy. Public administration in practice is emphasized by utilizing case studies.

PS 377 Political Behavior 3c-0l-3sh
Prerequisites: PC101, PS111
An interdisciplinary course which investigates the psychological bases of political behavior. Cross-listed in Psychology as PC 377: Political Behavior.

PS 380 Soviet Politics 3c-0l-3sh
Essential features of Communist party and government of U.S.S.R., including geographical and historical background and ideological and theoretical foundations. PS280: Comparative Government, should be taken prior to this course. (Course content is in revision to reflect changing structure.)

PS 382-387 Political Systems 3c-0l-3sh
Intensive, comparative study of the government and politics of a selected region. Suggested prerequisites: PS280 and/or 285; PS382 - Africa; PS383 - Asia; PS384 - Middle East; PS385 - Central and Eastern Europe; PS387 - Latin America.

PS 388 Political-Military Strategy 3c-0l-3sh
Prerequisites: PS281 or PS283 or MS101-102
Deals with national security problems including decision making and budgeting, levels of strategy, the utility of force, and the impact of the military on American society.

PS 389 Developing Nations 3c-0l-3sh
Suggested prerequisites: PS280 and/or 285
Political characteristics of emerging nations; impact of economic and social change upon political structure; evolving patterns of political development; and techniques of nation-building.

PS 480 Political Science Seminar 3c-0l-3sh
Readings and written assignments on a specific topic determined by the instructor in charge.

PS 481 Special Topics var-1-3sh
Course focusing on a specific topic determined by the instructor in charge. See department office for current listings.

PS 482 Independent Studies var-3sh
Readings and written assignments on a specific topic determined by the instructor and student. Permission required.

PS 493 Political Science Internship var-2-12sh
Prerequisites: 9 sh in Political Science with 2.0 QPA; PS111; approval of internship director and chairperson
Practical experience in government and politics. "Log" and research project required. Course grade determined by the instructor. Maximum of 6 sh applied to minimum in major; maximum of 3sh applied to minimum in minor.

PY: Physics
Department of Physics
College of Natural Sciences and Mathematics

PY 101 Energy and Our Environment 3c-0l-3sh
An overview of the areas of energy, transportation, and pollution. These topics are approached via the relevant concepts of physical science and physics. A nonlaboratory course for Liberal Studies requirements.

PY 111 Physics I Lecture 3c-0l-3sh
Prerequisites: Elementary algebra and trigonometry
General college physics; mechanics, wave motion, and sound.

PY 112 Physics II Lecture 3c-0l-3sh
Prerequisite: PY111
Electricity and magnetism, heat, light, atomic and nuclear physics, and an elementary introduction to relativity and quantum theory.

PY 121 Physics I Lab 0c-3l-1sh
Corequisite: PY111
Physics laboratory at level of Physics I; exercises in mechanics, wave motion, and sound. Lab previously listed as PY111-2.

PY 122 Physics II Lab 0c-3l-1sh
Corequisite: PY112
Physics laboratory at level of Physics II; exercises in optics, electricity and magnetism, and radioactivity. Lab previously listed as PY112-2.

PY 131 Physics I-C Lecture 3c-0l-3sh
Prerequisites: MA121, 123, or 127, at least concurrently
A calculus-based course in general college physics; topics covered are similar to those covered in Physics 111 but are treated in more depth through the use of calculus.

PY 132 Physics II-C Lecture 3c-0l-3sh
Prerequisites: MA122, 124, or 128, at least concurrently.
Continuation of Physics I-C; topics covered are similar to those covered in Physics II but are treated in more depth through the use of the calculus.

PY 141 Physics I-C Lab 0c-3l-1sh
Corequisite: PY131
Physics laboratory at same level as Physics I-C; exercises in mechanics, wave motion, and sound. Lab previously listed as PY131-2.

PY 142 Physics II-C Lab 0c-3l-1sh
Corequisite: PY132
Physics laboratory at same level as Physics II-C; exercises in optics, electricity and magnetism, and radioactivity. Lab previously listed as PY132-2.

PY 150 Computer Application to Physics Laboratories 2c-2l-3sh
Covers applications of microcomputers to laboratory data acquisition, as well as interfacing design and construction.

PY 151 Medical Physics Lecture 3c-0l-3sh
Development of concepts and principles of physics with a strong emphasis as to their use and application in medical and other biophysical areas.

PY 161 Medical Physics Lab 0c-3l-1sh
Corequisite: PY151
Experiments dealing with applications of physical principles to the field of medicine. Practical experience with use of electronic equipment, chart recorders, etc., of type found in modern-day medicine will be introduced. Lab previously listed as PY151-2.

PY 222 Mechanics I 2c-0l-2sh
Prerequisites: PY111 or 131; MA122, 124, or 128
Dynamics of a particle in one, two, and three dimensions, central forces including planetary and satellite motion, energy in particle dynamics, statics, and systems of particles.

PY 223 Mechanics II 2c-0l-2sh
Prerequisites: PY222, MA241
Mechanics of a rigid body, constraints, oscillations, wave motion, introduction to Lagrangian and Hamiltonian formulation and relativistic mechanics.

PY 231 Electronics 3c-3l-4sh
Prerequisites: PY112 or 132; MA122, 124, or 128
Circuit theory, transients, transistor circuits, frequency response, input and output impedance, feedback and electronic noise. Operational amplifiers and digital electronics.

PY 242 Optics 3c-0l-3sh
Prerequisites: PY112 or 132; MA122, 124, or 128
Geometrical optics and physical optics; including interference, diffraction, and polarization. Quantum Optics is introduced.

PY 299 Cooperative Education I var-1-3sh
Prerequisites: PY 132; completion of 30 credits with a minimum of 2.0 GPA and approval of the cooperative education coordinator
This program blends classroom theory with practical application through job-related experience. Students will work in positions offered by the participating industrial or federal/state work-study program employers under joint supervision of the Physics faculty and the on-site supervisor. A co-op student must be a full-time university student in good academic standing and be planning to return to campus for completion of his/her degree program. Evaluation requirements may include on-site visitations by the faculty/coordinator, consultation with the on-site supervisor, and a major progress report by the student or the presentation of a detailed oral report before the departmental cooperative education committee.

PY 322 Electricity and Magnetism I 2c-0l-2sh
Prerequisite: PY222
Electrostatic potential theory, dielectrics, dipole theory, magnetostatics, Maxwell equations for static fields, and Legendre's polynomials and other approximation methods.

PY 323 Electricity and Magnetism II 2c-0l-2sh
Prerequisite: PY322
Time-dependent form of Maxwell equations, electromagnetic induction, vector potential, magnetism, radiation fields, and Poynting vector

PY 331 Modern Physics 3c-0l-3sh
Prerequisites: PY112 or 132, MA122, 124, or 128
Introduction to particle and wave properties of matter, atomic structure, relativity, solid state and nuclear physics.

PY 342 Thermal and Statistical Physics 3c-0l-3sh
Prerequisites: PY112 or 132, MA122, 124, or 128
Thermometry, laws of thermodynamics, low-temperature physics, entropy, properties of ideal gas, and an introduction to statistical mechanics.

PY 350 Intermediate Experimental Physics I 0c-6l-3sh
Prerequisites: PY242 and 331
Required fundamental experiments in areas of mechanics, optics, modern physics, and heat.

PY 351 Intermediate Experimental Physics II 0c-6l-3sh
Prerequisite: PY 350
Increasingly sophisticated experiments in essential areas of physics. Digital computers and the Van de Graaff are available.

PY 352 Applied Physics Laboratory 0c-6l-3sh
Prerequisites: PY 231, PY 150, or permission of instructor
In this laboratory the student is introduced to much of the fundamental equipment used in industry. The student is trained in the operation and proper use of this equipment through a series of experiments that teach him/her signal detection and analysis including data acquisition by computer. The student will receive instruction on the proper methods to be used for various oral and written presentations.

PY 353 Solid State Electronics Laboratory 0c-6l-3sh
Prerequisite: PY352 or permission of instructor
In this laboratory the student will encounter a number of areas of current interest in semiconductor technology. The student will perform experiments and learn skills in such areas as device process simulation, device simulation, measurements of semiconductor materials, and measurement of device parameters. The student will also be instructed in the proper presentation of written and oral reports.

PY 399 Cooperative Education II var-1-3sh
Prerequisites: PY 299; PY 350; completion of 80 credits with a minimum of 2.5 GPA and approval of the cooperative education coordinator
A second course in cooperative education. Includes instruction that builds upon learning experiences in college by combining and correlating them with learning experiences at the training station to meet the student's career goals. Evaluation requirements may include on-site visitations by the faculty/coordinator, consultation with the on-site supervisor, and a major progress report by the student or the presentation of a detailed oral report before the departmental cooperative education committee. No more than three semester hours of PY 299, PY 399, and/or PY 493 may be used in fulfilling physics major course requirements.

PY 432 Advanced Electronics 2c-3l-3sh
Prerequisite: PY231
Digital measurement, switching circuits, logic circuits, counting, coding, input and output, AD and DA converters, computer organization.

PY 472 Nuclear Physics 3c-0l-3sh
Prerequisite: PY331
Survey of nuclear physics, nuclear size, nuclear mass, reaction theory, types of radioactive decay, nuclear models, nuclear forces, and elementary particles.

PY 473 Quantum Mechanics I 4c-0l-4sh
Prerequisites: PY222 and 331
Quantum mechanics following methods of Schrodinger and Heisenberg; the theory is applied to properties of harmonic oscillator, hydrogen atom, electron in a magnetic field, and radioactive decay of alpha particles.

PY 475 Physics of Semiconductor Devices I 3c-0l-3sh
Prerequisites: PY231, PY242, PY342, or permission of instructor
Develops the basic foundation for a study of the theory of semiconductors. Elementary quantum concepts, the band theory of solids, electrical properties of solids, effective mass theory, and principles of semiconductor devices are discussed.

PY 476 Physics of Semiconductor Devices II 3c-0l-3sh
Prerequisite: PY 475 or permission of instructor
Discusses the physics and operation of a number of discrete devices including: bipolar transistors, MOSFETS, JFETS, CCDs, various diode technologies, photovoltaic and photoconductive devices, solid state lasers, and light-emitting diodes.

PY 480 Seminar var-1sh
Speakers from within and outside the university conduct a seminar on a weekly or biweekly basis on different topics of interest in the physics community.

PY 481 Special Topics in Physics var-1-3sh
Varies from semester to semester and covers diverse topics in specific areas of physics. This course number is also used to offer courses under development.

PY 482 Independent Study in Physics var-1-6sh
With departmental permission, an advanced student may investigate one or more areas of physics in the student's interest. Work is supervised by a physics faculty member but does not necessarily involve regular lecture or laboratory hours

PY 490 Solid State Physics 3c-0l-3sh
Prerequisites: PY223 and 331
Reciprocal lattice, crystal structure, the quantization of fields to produce quasi-particles such as phonons, magnons, excitons, Fermi gas of electrons, energy bands, semiconductor crystals, and photoconductivity

PY 493 Internship in Physics var-1-3sh
Prerequisites: PY 350; completion of 90 credits with a minimum of 2.5 GPA and approval of the internship education coordinator
Supervised professional work-experience in physics and applied physics. Location, duties, internship, and hours are individually tailored to the student's career goals. A maximum of 3sh of internship in the student's major may be applied toward the physics major area elective requirements. Additional internship credit must be used as free electives. Evaluation requirements include on-site visitations by the faculty/coordinator, consultation with the on-site supervisor, and a major progress report by the student or the presentation of a detailed oral report before the departmental internship education committee.

QB: Quantitative/Business
Department of Management Information Systems and Decision Sciences
College of Business

Note: All courses at the 300 and 400 level are open only to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

QB 215 Business Statistics 3c-0l-3sh
Prerequisites: MA121, MA214
Expands upon the probabilistic concepts developed in MA 214 to orient the student toward managerial decision making using quantitative methodologies. Topics covered include classical regression analysis, forecasting, Bayesian decision theory, linear programming, and simulation.

QB 380 Introduction to Management Science 3c-0l-3sh
Prerequisite: QB215
Discussion and application of mathematical models used in managerial decision making. Linear programming, Markov processes, queuing theory, EOQ models, and simulation techniques are among the topics covered.

QB 401 Forecasting Methods for Business 3c-0l-3sh
Prerequisite: QB 215
This course is designed to train the students to understand the nature of forecasting problems and the techniques of forecasting methods and their business applications. Computer statistical packages are incorporated into the course so that forecasting methods and models can be applied to real-world problems, and the relationships that exist between variables can be examined.

RH: Rehabilitation
Department of Special Education and Clinical Services
College of Education

RH 200 Introduction to Rehabilitation 3c-0l-3sh
A foundation for subsequent courses in the rehabilitation sequence. It is also available as a prerequisite or basic course for students interested in the rehabilitation of individuals in our society. Content includes the philosophy, history, major concepts, and current problems and issues.

RH 211 Medical Aspects of Rehabilitation 3c-0l-3sh
Provides an overview of the etiology and pathology of a range of medical disorders which often require rehabilitative services. Emphasis is placed upon the psychosocial and functional effects of these disorders, vocational implications, and rehabilitative needs.

RH 220 Neurological Basis of Disability 3c-0l-3sh
Prerequisites: EX120, RH200, BI155 or HP221
Study of the brain and spinal cord with emphasis on cortical and subcortical mechanisms instrumental in normal motion, coordination, and bodily sensation, exclusive of vision and hearing. Discussion and demonstration of conditions of cerebral palsy, poliomyelitis, traumatic paraplegies, cerebrovascular accident, Parkinson's disease, multiple sclerosis, and rehabilitative procedures.

RH 312 Psychological Basis of Disability 3c-0l-3sh
Study of emotional and social responses which govern behavior and relationships of handicapped individuals and rehabilitation workers alike, with emphasis on the role of disability in formation of the concept of human worth.

RH 321 Principles and Methods of Rehabilitation 3c-0l-3sh
Prerequisites: RH220, RH312, and permission of instructor
Delineates the roles of members of professional disciplines of medicine, psychology, prosthetics, orthodontics, audiology, speech pathology, physical and occupational therapy in restoration of the handicapped; use of diagnostic information; significance and interpretation of medical examination; role of rehabilitation counselor in the agency.

RH 322 Rehabilitation Case Study and Interpretation 3c-0l-3sh
Prerequisites: RH220, RH312, or permission of instructor
Purpose and techniques of case history taking; meaning and evaluation of diagnostic information; psychological evaluation in terms of mental ability, personality, attitudes, and dexterity skills; role of disabled individual's family in planning of services; referrals and report writing.

RH 360 Rehabilitation Counseling: Strategies 3c-0l-3sh
Prerequisites: Permission, Rehabilitation majors only
Designed to help students develop competencies in using various counseling techniques with handicapped persons. Various theories of counseling will be explored relative to the rehabilitation setting. It will provide basic counseling skills to upperclass Rehabilitation majors prior to field training.

RH 410 Vocational Assessment in Rehabilitation Counseling 3c-0l-3sh
Prerequisites: EX120, RH220, or faculty permission
Provides students with an overview of vocational assessment techniques and instruments for use with rehabilitation clients who are blind, deaf, mentally retarded, or severely physically handicapped. Includes discussion of rehabilitation evaluation.

RH 412 Occupational Aspects of Rehabilitation 3c-0l-3sh
Prerequisites: RH220, RH311, or permission of instructor
The realism of the world of work and relationship of gainful employment to human autonomy and decision making. Types of jobs, levels of required skills, potential capabilities of the disabled relative to specific job responsibilities, methods of assessing potential job success, and sheltered workshops.

RH 422 Current Topics in Rehabilitation 3c-0l-3sh
Taken concurrently with RH488 and RH493
Discussion of current topics of interest in the field, such as state and federal legislation, new prosthetic advances, proposals of the National Rehabilitation Association, or recent techniques in working with specific disabilities.

RH 460 Advanced Rehabilitation Counseling 3c-0l-3sh
Prerequisite: RH360
Selected counseling techniques studied and practiced under supervision. Application will be utilized in roles that will approximate the kind of clients encountered in field training.

RH 484 Directed Rehabilitation Activities var-3sh
Prerequisites: Permission, Rehabilitation majors only
Pre-field training experience working with handicapped clients in local facilities. Concrete experience will help the students integrate classroom instruction with field experiences.

RH 488 Field Training in Rehabilitation I var-6sh
Prerequisites: All major courses in program
Emphasizes development of the student rehabilitation coordinator by working with disabled clients in a public or private agency. Writing and analysis of case reports, counseling of clients, understanding of agency responsibilities and limitations, referral, follow-up, and final evaluation of the client's ability to function with various degrees of autonomy. Taken concurrently with RH493 and RH422.

RH 493 Field Training in Rehabilitation II var-6sh
Prerequisite: All major courses in program
Provides a second field experience. Taken concurrently with RH488 and RH422.

RS: Religious Studies
Department of Philosophy and Religious Studies
College of Humanities and Social Sciences

RS 100 Introduction to Religion 3c-0l-3sh
An introduction to the academic study of religion through an examination of various dimensions of religious expression and traditions. The course will cover such areas as problems about definition of religion; approaches to the study of religion; the goals, language, and rituals of religion; cases of religious experience; faith, disbelief, and alternatives to religion; religion and the sociocultural context.

RS 110 World Religions 3c-0l-3sh
A comparative study of the history, teaching, and rituals of the major religions of the world and their influence on contemporary society. A nonsectarian approach to religions such as Native American religion, Afro-American religion, Judaism, Christianity, and Islam in relationship to Hinduism, Buddhism, Confucianism, Taoism, and Shinto.

RS 200 Religion and Culture: Their Interaction 3c-0l-3sh
A systematic study of the interaction of religions and various components of culture, as a way of understanding the phenomenon of religion. The approach is functional and descriptive; it uses case studies which are chronologically and culturally diverse, covering such areas as religion and politics, economics, arts, science, and literature.

RS 210 World Scriptures 3c-0l-3sh
Major sacred writings of Hindu, Buddhist, Zoroastrian, Moslem, Confucian, Taoist, and Judeo-Christian traditions will be studied from point of view of their religious significance.

RS 250 Understanding the Bible 3c-0l-3sh
An introduction to scholarly methods and major themes necessary to understand the Hebrew Scriptures and the New Testaments of the Judeo-Christian tradition.

RS 260 American Religious Development 3c-0l-3sh
A survey and analysis of topics which depict the role of religion in the U.S., e.g., American Indian religion; religion and the discovery/colonization/immigration trends of the U.S.; religion and the Constitution; indigenous religious movements; black religion; ecumenism; atheism; cults; mass media and religion; religion in Indiana County.

RS 290 Christianity 3c-0l-3sh
A study of the beliefs, practices, significant persons, history, and cultural impact of Christianity.

RS 311 Eastern Philosophy 3c-0l-3sh
An examination and critique of the philosophies which have shaped Eastern world views and ways of life as found in a representative sampling of Chinese, Japanese, and Indian thought.

RS 312 Archaeology and the Bible 3c-0l-3sh
An investigation of religious-historical traditions of the Bible in light of archaeological research. Will include study of archaeological method and interpretation, discoveries in Egypt, Mesopotamia, and Syro-Palestine as background for understanding the traditions and religious practices and beliefs of Israel, and special questions surrounding the Patriarchal narratives, the Exodus and Conquest, Israel under David and Solomon, the Dead Sea Scrolls, and New Testament times.

RS 360 African Religions 3c-0l-3sh
An examination of the nature of African traditional religion and how traditional religion, Islam, and Christianity coexist and influence each other.

RS 365 Native North American Religions 3c-0l-3sh
An introduction to the indigenous religions of North America and to the peoples who practice these rich and varied approaches to the sacred. This course not only examines major religious themes and dimensions (myth, ritual, ethics, etc.) but includes an historical perspective on North American Indian lifeways. This perspective involves discussion of the clash with Euro-American values and contemporary native religious responses to social crisis and change.

RS 370 Religions of China and Japan 3c-0l-3sh
A study of Confucianism, Taoism, Buddhism, Shinto, and popular religion in China and Japan, including historical and theological foundations, development of thought, contemporary expressions, and encounters with the modern world.

RS 375 Religions of India 3c-0l-3sh
A study of Hinduism, Indian Buddhism, Jainism, and Sikhism, including historical and theological foundations, development of thought, contemporary expressions, and encounters with the modern world

RS 380 Islam 3c-0l-3sh
A study of Islam including historical and theological foundations, developments of thought, contemporary expressions, and encounters with the modern world.

RS 410 History of Christian Thought I 3c-0l-3sh
The development of Christian thought approached through an in-depth study of selected writings from the early Church Fathers to the Protestant Reformers

RS 440 History of Christian Thought II 3c-0l-3sh
An examination of Christian thought, approached through in-depth study of selected writings from major theologians of the 19th and 20th centuries.

RS 481 Special Topics 3c-0l-3sh
Topical courses which will vary from semester to semester. See current schedule of classes.

RS 482 Independent Study var-1-6sh
Individual students wishing to pursue religious studies interests not covered in the department's regular offering may do so by seeking approval for independent study. Make inquiry of the chairperson. Upon approval students are guaranteed at least five hours of faculty time per credit. All programs of study must be accepted by the department as a whole. May be taken more than once to maximum of 6sh. (This option is available to both Religious Studies majors and nonmajors.)

RS 482 Independent Study: Honors 3c-0l-3sh
Prerequisites: 3.00 QPA, 15sh in Religious Studies, and 3.20 average in departmental courses
Majors in Religious Studies are invited to take 3sh of independent study designated "Honors Project." Upon satisfactory completion, graduation with departmental honors is possible.

RS 493 Internship in Religious Studies 6-12sh
Prerequisites: Junior or senior; Religious Studies major or double major; 2.5 QPA in major; department approval
Supervised experience in a public or private organization which extends and complements coursework in Religious Studies.

RT: Respiratory Care
Allied Health Professions Programs
College of Health and Human Services

RT 326 Respiratory Care Clinical Practice I var-3sh
First exposure to patient care. Introduction and practice of basic respiratory care treatment modalities receive emphasis.

RT 327 Pharmacology 3c-0l-3sh
Introduction to pharmacology and therapeutics. Emphasis placed on the drugs used in respiratory care. Drug classification, action, usage, dosage, and availability will be discussed

RT 328 Introduction to Respiratory Care 4c-0l-4sh
Topics include medical terminology and an overview of cellular structure and function. Emphasis is placed on neurophysiology, respiratory anatomy, and physiology

RT 329 Respiratory Care Instrumentation 4c-0l-4sh
Introduction to basic respiratory care equipment and related procedures. Special emphasis will be placed upon the rationale and techniques of oxygen administration

RT 330 Cardiopulmonary Resuscitation 2c-0l-2sh
Comprehensive analysis of the principles and practices of numerous methods of resuscitation.

RT 331 Introduction to Ventilator Management 1c-0l-1sh
This course is designed to establish competence in changing ventilator tubing circuitry in the laboratory situation. Introductory principles, techniques, and theory of ventilator application will also be explored

RT 333 Respiratory Care Clinical Practice II var-4sh
Treatment procedures introduced in Clinical I are continued with greater emphasis on independence. Specialty rotations are added to broaden exposure to respiratory care and critical care.

RT 334 Respiratory Care Instrumentation and Application 4c-0l-4sh
Provides students with a comprehensive knowledge of mechanical ventilation. The care of critically ill and physiologic consequences of mechanical ventilation will be discussed.

RT 335 Nursing Arts 3c-0l-3sh
An overview of the history of respiratory care and nursing. Topics include medical records, infection control, sterilization, and psychosocial aspects of illness.

RT 336 Cardiopulmonary Evaluation and Clinical Correlation 4c-0l-4sh
Disease states of the pulmonary and related systems are investigated in progression from etiology through treatment and prognosis.

RT 337 Introduction to Pulmonary Function Studies 1c-0l-1sh
The student is introduced to the basic principles of lung volumes, capacities, and their measurement. Blood gas sampling and electrodes are also explored.

RT 426 Respiratory Care Clinical Practice III var-5sh
Respiratory care treatment procedures are continued with emphasis on improving proficiency and refining skills. Students will make rounds with physicians.

RT 427 Applied Pulmonary Physiology 4c-0l-4sh
Various aspects of pulmonary physiology will be discussed and applied to acid-base and blood gas analysis and interpretation.

RT 428 Essentials of Electrocardiography 2c-0l-2sh
Designed to acquaint the student with basic principles in cardiac electro-diagnostics. Topics include the technique of ECG testing and fundamentals of ECG arrhythmia recognition.

RT 429 Design and Function of a Respiratory Care Program 2c-0l-2sh
Basic management principles as they apply to the hospital setting; in particular, respiratory care departments and schools will be discussed.

RT 430 Pulmonary Function Studies 2c-0l-2sh
Prerequisite: RT337
Principles, techniques, and equipment employed in pulmonary diagnostics are explored. Diagnostic studies include basic spirometry, flow-volume loops, diffusion studies, exercise testing, bronchoprovocation studies, and small airways diagnostics.

RT 431 Pediatric Respiratory Care 1c-0l-1sh
Prerequisites: RT334 and RT336
The application of respiratory care to children ages six months to fifteen years is explored. Cardiopulmonary pathophysiology and treatment for the following disorders are discussed: Croup, Epiglottitis, Asthma, Cystic Fibrosis, Congenital Heart Defects, Abdominal and Chest Wall Defects.

RT 433 Respiratory Care Clinical Practice IV var-5sh
Rotations on treatment and intensive respiratory care are continued. Advanced rotations are included.

RT 434 Neonatal Respiratory Care 3c-0l-3sh
Basic terminology, anatomy, and pathophysiology of obstetric, fetal, neonatal, and pediatric patients will be presented.

RT 436 Respiratory Care Teaching 2c-0l-2sh
An introduction to respiratory education

RT 437 Methods in Critical Care 2c-0l-2sh
Critical Care diagnostic and therapeutic modalities pertinent to respiratory care will be discussed. Topics include invasive and noninvasive cardiac monitoring, pulmonary monitoring, neurological assessment, ventilator commitment, and discontinuance.

RT 438 Cardiopulmonary Rehabilitation 1c-0l-1sh
Techniques and principles associated with cardiopulmonary rehabilitation programs are surveyed. Topics also include the management of chronic pulmonary disease in the home and the application of respiratory equipment and mechanical ventilators in this setting.

RT 481 Special Topics in Respiratory Care var-1-3sh
Varies from semester to semester covering diverse topics in specific areas of respiratory care not covered in regular coursework.

SA: Safety Sciences
Department of Safety Sciences
College of Health and Human Services

SA 101 Introduction to Occupational Safety and Health 3c-0l-3sh
Covers theory and history of industrial hazard control, effects of hazards and failures on organizational control and productivity, safety and health legislation, accident causation, organization and administration of safety and health programs, aspects of recognizing, evaluating, and understanding control of safety and health hazards, acquiring hazard data, hazard analytical tools, communication techniques in safety and health management, and the role of interfacing management systems in hazard control.

SA 102 Introduction to Mine Safety and Health 3c-0l-3sh
Designed to provide the student with an in-depth background of the problems involving mine safety. An historical approach to coal and mineral mining is reviewed; legislative influences such as the Federal Coal Mine Health and Safety Act, the Metal and Nonmetal Mine Health and Safety Act, and the Occupational Safety and Health Act are discussed in depth; mining techniques, methods, and systems are discussed. Management of mine health and safety programs is presented. Federally mandated training of employees is covered.

SA 111 Principles of Industrial Safety I 3c-0l-3sh
Prerequisite: SA101 or SA102
Stresses understanding the complexity of industrial hazard control problem by thoroughly examining elements of safety and health enumerated in OSHA-promulgated standards. Emphasis given to plant layout and design, materials handling, machine guarding, walking and working surfaces, hazardous materials and combustible liquids, boilers and unfired pressure vessels.

SA 211 Principles of Industrial Safety II 3c-0l-3sh
Prerequisite: SA101 or SA102
Stresses understanding the complexity of the industrial hazard control problem by thoroughly examining elements of safety and health enumerated in the OSHA-promulgated standards. Emphasis on welding and cutting operations, electrical safety, chemical safety, personal protective equipment, industrial sanitation, and construction safety.

SA 231 Principles of Mine Safety I 3c-0l-3sh
Prerequisite: SA102
Focuses on the various aspects of mining operations such as slope and shaft development, mine design, ground control, hoisting; man-trips; haulage; mining equipment; mine emergency planning and procedures; mine communications and maintenance.

SA 232 Principles of Mine Safety II 3c-0l-3sh
Prerequisite: SA102
Covers surface mining operations such as slope stability, equipment, ground water, and control. Mine-related processing operations are discussed. Provides an in-depth study of the various controls of electrical hazards and ignition sources such as permissible equipment and electrical distribution systems. The uses of explosives and blasting practices, handling, storing, and transportation with emphasis on causes of explosion involving dust and gases are discussed.

SA 245 Product Safety 3c-0l-3sh
Prerequisite: MA217
Traces flow of applicable legislation dealing with consumerism and product safety. Corporate liability for product safety emphasized through case studies. Student familiarized with evolving role of Consumer Product Safety Commission. Corporate management of product development and safety detailed with emphasis on systems safety analysis, standards, and product testing. (Numbered SA445 prior to 1989)

SA 299 Cooperative Education I 0e-0l-0sh
Prerequisites: Approval of academic adviser, co-op coordinator, and department chairperson
The initial experience in a program designed to combine classroom theory with practical application through job-related experiences. The course is open to SA majors and minors usually in their sophomore year. Students are employed by organizations outside western Pennsylvania where there is an ongoing hazard control program under the direction of an experienced professional. The student is required to be in good academic standing and to serve a minimum of two alternating work experiences.

SA 301 Health Hazard Identification 3c-0l-3sh
Prerequisites: CH102, PY111, MA122, BI155
Provides an understanding of the primary health hazards found in industry and their effects on the human body. Students learn to recognize hazards involved with air contaminants, noise, heat, radiation, chemicals on the skin, and other stressors. Emphasis is placed on the study of occupational disease, industrial toxicology, and use of threshold limit values.

SA 303 Control of Health Hazards 3c-0l-3sh
Prerequisites: SA301, PY112, MA217
Study of engineering, administrative, and personal protective equipment as methods of reducing or eliminating hazards to the health of industrial workers. Topics covered include industrial ventilation, noise control, heat control, radiation control, personal protective equipment, and industrial health program.

SA 311 Industrial Fire Protection 3c-0l-3sh
Prerequisites: CH102, PY112, SA211
Introduces fundamental concepts in protection of industrial workers and property from fire and explosion. Fire chemistry, control of ignition sources in industry, and properties of combustible materials are discussed. Fire detection and extinguishment are covered along with building construction for fire prevention, life safety, fire codes, and related topics.

SA 345 Systems Safety Analysis 2c-3l-3sh
Prerequisites: SA111, SA211, MA217
Focuses on the evaluation of system designs using detailed system analysis techniques. Topics covered include system definition, economics of systems safety, systems safety methodology, ergonomic approaches, mathematics of system analysis, including statistical methods, Boolean algebra, and reliability. Preliminary hazard analysis, task analysis, failure mode and effect analysis, fault tree analysis, and exercises in the application of fault tree analysis to

hardware and man/machine systems. Practical analysis work is accomplished in laboratory sessions.

SA 347 Ergonomics 2c-3l-3sh
Prerequisites: SA301, BI155
An exploration of the principles which control human performance and its effect upon the safety and reliability of systems. Engineering anthropometry, biomechanics of motion and work posture, work physiology, and performance measurement are covered in the context of their application in workplace design. Students will be instructed in methodologies for analysis tasks and human performance requirements. Important human limitations are studied in laboratory sessions.

SA 370 Fleet Safety 3c-0l-3sh
Prerequisites: SA101, junior standing
Includes topics involved with the development and operation of motor fleet safety programs: driver selection and training, accident investigation and recordkeeping, equipment safety features, preventive maintenance, and driver incentive programs.

SA 380 Institutional Safety Management 3c-0l-3sh
Prerequisite: Junior standing
Historical aspects of safety for both private and public institutions; introduction to trends in liability and institutional safety regulations. Distinctions will be made between employee, visitor, and patient hazards and their control.

SA 399 Cooperative Education II 0c-0l-0sh
Prerequisite: SA 299
A second experience in a program designed to combine classroom theory with practical application through job-related experiences. The course is open to SA majors and minors usually in their junior or senior year. Students are employed by organizations outside western Pennsylvania where there is an ongoing hazard control program under the direction of an experienced safety professional. The student is required to be in good academic standing and to serve a minimum of two alternating work experiences

SA 401 Mine Ventilation 2c-3l-3sh
Prerequisites: PY112, SA102, MA122, or consent
Study of mine ventilation principles and practices which provide a basic knowledge in design and operation of mine ventilation systems. The topics of airflow physics, ventilation standards, fan fundamentals, pressure losses, required air flows, and overall design are discussed. Specific problems in mine ventilation will be solved.

SA 402 Health Hazard Evaluation 2c-3l-3sh
Prerequisites: SA301, PY112, MA217
A lecture/laboratory course which provides a basic understanding of techniques used in measuring and evaluating the magnitude of health hazards in industry. Laboratory sessions provide experience in air sampling, noise measurement, heat measurement, particle size analysis, chemical analysis, and evaluation of industrial ventilation systems.

SA 412 Evaluation of Safety Program Effectiveness 3c-0l-3sh
Prerequisites: MA 217, junior standing
Teaches reasons and importance of evaluating the effect of safety and health innovations on organization performance, devising measuring systems capable of extracting accurate, meaningful data, methods of collecting, codifying, and processing accident-injury information, and utilization of data retrieval systems.

SA 441 Accident Investigation 3c-0l-3sh
Prerequisites: SA101, junior standing or consent
Focuses on various aspects of accident investigation such as recent theories associated with accident causes, investigative techniques, data acquisition, structure of investigative reports, management responsibilities, and remedial actions. Particular emphasis on determining sequence of events to develop management actions which will prevent recurrence of accidents.

SA 461 Air Pollution 3c-0l-3sh
Prerequisite: SA301 or consent
Focuses on various major aspects of the air pollution problem. Includes sources of pollution, evaluation and engineering of pollutants, government regulations, atmospheric chemistry and dispersion, and human and nonhuman effects. Particular emphasis on information that is practical for the safety management, industrial health, or environmental health professional.

SA 462 Radiological Health 3c-0l-3sh
Prerequisite: SA301 or consent
Study of problems associated with ionizing radiation in human environment. Emphasis given to biological effects, radiation measurement, dose computational techniques, exposure control, and local and federal regulations. Study and use of various radiological instruments included.

SA 472 Process Safety in the Chemical Industry 3c-0l-3sh
Prerequisites: SA301, SA311, SA345, and senior standing, or permission of instructor
This course is designed to cover all important aspects of loss prevention as it is practiced in the chemical process industries. Its objective is to prepare the safety professional so that he/she may be able to work more effectively with chemists and chemical engineers in joint hazard identification, evaluation, and control projects. (Numbered as SA 482 prior to 1989)

SA 481 Special Topics in Safety Sciences 3c-0l-3sh
Prerequisite: Permission of instructor
An elective offering in which the specific topic may vary.

SA 482 Independent Study var-1-3c
This course is a student-initiated program supervised by one faculty member. It is open to Safety Sciences and related majors in the junior and senior years. Students will study in depth a special topic of importance to occupational safety and health. Requirements of this course include extensive reading, evaluation of problems, and one or more research papers.

SA 493 Internship var-6sh
Prerequisite: Senior standing, all required courses in major
All Safety Sciences majors are expected to take this course. It is conducted away from the university at various industrial enterprises. Students are required to provide their own transportation. Intended to allow the student to apply hazard assessment and safety management practices to actual industrial situations while at same time being exposed to complexities of industrial environment.

SA 493 Internship 12sh
Prerequisites: Senior standing, all required courses in major, minimum of 2.5 overall and 2.8 GPA in major, and consent
This course is a practicum conducted at an approved occupational setting up to 500 miles away from IUP. Students are required to conduct four major projects over the course of the summer. One project will be from each of the following areas: Safety Management, Industrial Safety, Industrial Hygiene, and Fire Protection. Students are accountable to an on-site supervisor and are required to remain in close contact with a Safety Sciences faculty coordinator. Offered in summer only

SC: Science
College of Natural Sciences and Mathematics

SC 101 Fundamentals of Physics 2c-2l-2.5sh
Prerequisite: Elementary Education major or instructor permission
A conceptual course in physics for Elementary Education majors. High school physics is not a prerequisite. Class and lab presentations concentrate upon dispelling naive concepts and developing a better understanding and appreciation of the physical world. The topics of motion, heat, light, sound, electricity, magnetism, and the nucleus are presented in context with our everyday experiences. This course does not fulfill the Liberal Studies requirement except for Elementary Education majors.

SC 102 Fundamentals of Chemistry 2c-2l-2.5sh
Prerequisite: Elementary Education major or instructor permission
A survey of chemical principles and concepts. The nature of chemical reactions as applied to technology and its applications to society. The world of consumer chemistry will be explored. The goal is to develop a chemical literacy for the student. A series of laboratory exercises develops concept understanding and process skills. Some individual and group projects will be included. This course does not fulfill the Liberal Studies requirement except for Elementary Education majors.

SC 103 Fundamentals of Earth and Space Science 2c-2l-2.5sh
Prerequisites: SC101, SC102
Introduction to geology, astronomy, oceanography, and meteorology for Elementary Education majors. Emphasis is placed on the understanding of large-scale processes and how the earth, solar system, and universe work. Lab

experiences include hands-on work with earth materials and with instruments from all of our subjects, map, and field trips which may occur during class times, nights, and weekends. This class does not fulfill the Liberal Studies requirement except for Elementary Education majors.

SC 104 Fundamentals of Environmental Biology 2c-2l-2.5sh
Prerequisites: SC101, SC102
A basic introduction to the major concepts and principles of ecology and their application to modern living for Elementary Education majors.

SC 105 Physical Science I 3c-2l-4sh
A descriptive and conceptual course in physics for the non-Science major. High school physics is not a prerequisite. Course content is designed to develop an understanding and appreciation of the physical world around us, to produce changes in attitude and background essential for our modern society, and to clarify the following topics: motion, heat, sound, light, electricity, magnetism, and the structure of matter.

SC 106 Physical Science II 3c-2l-4sh
A basic course in environmental and consumer chemistry for the non-Science major. High school chemistry is not a prerequisite. Major topics include humankind's use and abuse of soil, water, air and energy resources, global food production and hunger, the nuclear industry, and the threat of nuclear war. Consumer topics include vitamins and nutrition, food additives, pesticides, and drugs.

SH: Speech Pathology and Audiology (formerly Speech and Hearing)
Department of Special Education and Clinical Services
College of Education

SH 111 Introduction to Communication Disorders 3c-0l-3sh
Introduction to study of physiological, acoustical, and scientific processes involved in production and reception of speech. The genetic development of speech sounds and factors that hinder or facilitate speech and language acquisition. (Previous title: Fundamentals of Speech and Hearing)

SH 122 Clinical Phonology 3c-0l-3sh
Detailed study of the classification of American-English phonemes using the physical and acoustical perspectives. Development of proficiency in use of International Phonetic Alphabet for all-phonic transcriptions of normal and disordered speech. (Previous title: Phonetics)

SH 222 Introduction to Audiology 3c-0l-3sh
The study of auditory function, anatomy of auditory mechanism, psychophysics of sound, types and causes of hearing loss, measurement of hearing, and educational considerations for hearing-handicapped child.

SH 242 Speech Science I 3c-0l-3sh
Study of the communication process with emphasis on physical characteristics of sound production, transmission and perception of the sound, and the evolvement and use of symbols for meaningful communication. The scientific principles of normal oral communication are stressed, and language learning is recognized as a basis for oral communication. (Previous title: Introduction to Speech Science)

SH 251 Anatomy and Physiology of the Speech and Hearing Mechanism 3c-0l-3sh
Consideration of genetic development, structure, and function of the organs of speech and hearing. Anatomical systems involved in respiration, phonation, articulation, and hearing and relationships between systems in production and reception of speech.

SH 254 Classroom Management of Language Disorders 3c-0l-3sh
Study of aspects of speech, language, and hearing problems pertaining to classroom situation. Types of speech and hearing disorders, conducting speech and language improvement lessons, classroom aids for teaching the child with language, speech, and hearing impairment, and school and community resources for these children. (Required for majors in Education of the Exceptional and suggested for majors in Elementary Education)

SH 311 Aural Rehabilitation 3c-0l-3sh
Prerequisite: SH222
Consideration of the effects of varied degrees of hearing loss sustained by individuals at different stages of development and study of total education and rehabilitative procedures for the hard-of-hearing child or adult.

SH 334 Language Development 3c-0l-3sh
Study of the development of an interpersonal communication system; language as a system of symbols for communication, the structure of the English language, including phonology, syntax, and semantics with emphasis on the generative evolvement of sentences. Highlighting the neurological, social, and psychological bases of language development. (Offered as SH234 prior to 1993-4)

SH 342 Speech Science II 3c-0l-3sh
Prerequisite: SH242
Physiologic, acoustic, and perceptual characteristics of speech with special emphasis on speech monitoring and controls. Major lab instrumentation and research techniques in current use are described and demonstrated. Status of present knowledge is summarized and discussed.

SH 406 Articulation and Language Disorders 3c-0l-3sh
Prerequisites: SH111, 242, 251, 234
Exploration of the processes related to developmental articulation and language disorders from birth through adolescence. Instruction in the principles underlying modification of these disorders. Preparation of management programs and observation in the Speech and Hearing Clinic required. (Offered as SH306 prior to 1993-4)

SH 408 Stuttering and Voice Disorders 3c-0l-3sh
Prerequisites: SH111, 242, 251, 234
Introduction to the developmental, psychogenic, and organic bases for stuttering and voice disorders. Instruction in principles underlying treatment of these disorders with emphasis on anatomical deviations and laryngeal dysfunction. Preparation of management plans and observation in Speech and Hearing Clinic required. (Offered as SH308 prior to 1993-4)

SH 412 Organization and Administration of Speech and Hearing Program 3c-0l-3sh
Prerequisite: SH111 (meets requirement for Professional Education course)
Establishment and maintenance of speech and hearing programs within various administrative organizations, particularly in the public schools. Techniques of client identification, scheduling, recordkeeping, appropriate referral, material and equipment selection, teacher and parental counseling, and the development of coordinated professional and interdisciplinary procedures. To be scheduled the semester immediately preceding student teaching. (Offered as SH312 prior to 1993-4)

SH 420 Speech Clinic var-1-3sh
Prerequisites: ED242, ED342, QPA of 3.0+, all major courses, program director's permission
Experience in working with individuals or groups of persons who exhibit speech or hearing problems. Lesson planning, writing of reports, and case histories of a detailed nature. (Offered as SH320 prior to 1993-4)

SO: Sociology
Department of Sociology
College of Humanities and Social Sciences

SO 151 Principles of Sociology 3c-0l-3sh
Scientific study of structure and functioning of human societies, with special attention to factors responsible for organization and transformation of sociocultural systems. Specific course content varies from one instructor to another.

SO 231 Contemporary Social Problems 3c-0l-3sh
Exploration of some pressing problems currently endemic to Western society. Problems are defined and solutions explored in light of historical, political, economic, social, and anthropological data.

SO 233 Language and Culture 3c-0l-3sh
Focuses on social and cultural functions of language. Particular emphasis on analysis of non-Western languages. (Previous title: Cultural Symbolism: Language in Culture and Society)

SO 251 Sociology of Human Sexuality 3c-0l-3sh
Depth analysis of a formerly taboo topic, human sexuality. Current

information from biological, psychological, and sociological research on human relationships is presented to provide a foundation for self-understanding and societal values.

SO 271 Cultural Area Studies: Africa 3c-0l-3sh
Explores the cultural diversity of the continent of Africa. The first unit examines the historical processes which shape modern society, including the formation of indigenous African empires, the evidence for trade routes, slave trading, and colonialism. The second unit examines the nature of African traditional societies, including analyses of forager and agricultural groups. The last unit covers issues of contemporary development in Africa such as famine and agricultural policy, the status of women in economic development, and apartheid. Reading includes ethnographic and historical accounts of African society as well as selections by African writers on the issues of contemporary society. (Also offered as AN271; may not be taken for duplicate credit)

SO 272 Cultural Area Studies: China 3c-0l-3sh
Designed to assist the student in developing an understanding of contemporary China. While the course will begin with prehistoric and historic aspects of China, the focus will be on contemporary issues presented in the context of sociological theory. Specific Chinese cultural components that will be investigated include values, attitudes, norms, social organization, linguistics, and folklore. (Also offered as AN272; may not be taken for duplicate credit)

SO 273 Cultural Area Studies: Southeast Asia 3c-0l-3sh
An introduction to the peoples and cultures of Southeast Asia. Prehistory and the development of indigenous states in Southeast Asia and analysis of impact of world religions, such as Islam, and Western colonialism. Also examines modern hunter-gatherer and farming societies and discusses contemporary issues in social and economic change, including the "Green Revolution," tropical deforestation, the struggle of ethnic minority tribal peoples, and the plight of Indochinese refugees. (Also offered as AN271; may not be taken for duplicate credit)

SO 274 Cultural Area Studies: Latin America 3c-0l-3sh
An introduction to the peoples and cultures of Latin America. Focuses on the prehistory and development of pre-Columbian complex societies in Mesoamerica and the Andes, and analyzes the impact of European colonialism on these major regions. Also examines contemporary issues, such as civil wars, economic development, rural-urban migrations, and migration and immigration of Latin American peoples into the United States. (Also offered as AN274; may not be taken for duplicate credit)

SO 286 Marriage, Kinship, and the Family 3c-0l-3sh
Sociological and anthropological study of patterns of marriage, kinship, and family life, with emphasis on the relationship between family patterns and other social institutions. Topics covered include the family and marriage in historical and comparative perspective; worldwide patterns of gender stratification; incest and incest avoidance; class and race contexts of family patterns; mate selection and love; parenthood and child rearing; domestic and sexual violence; alternative family lifestyles; and the current crisis and possible future of the family. Intended for a broad audience, but also open to sociology and anthropology majors and minors. (Also offered as AN286; may not be taken for duplicate credit)

SO 301 Clinical Sociological Theory 3c-0l-3sh
Prerequisite: SO151
Develops an understanding of how to use micro and macro sociological theory to analyze, assess, and diagnose human problems. Employing case studies, prepares students to do casework and help solve interpersonal, group, and organizational problems. Also seeks to acquaint students with the broader professional activity of human services.

SO 302 Clinical Sociological Practice 3c-0l-3sh
Prerequisite: SO301
Prepares the student to effect constructive change within individuals, groups, families, and communities. Draws its analysis, diagnosis, and methods from the foundations of sociological theory at the level of intervention with clients.

SO 303 Social and Cultural Change 3c-0l-3sh
Prerequisite: SO151
Exploration of current theoretical perspectives on social and cultural change. Special attention given to planned change at the local or regional level

SO 314 Native Americans 3c-0l-3sh
Survey of culture history and culture area characteristics of Indians of North America. Detailed study of representative groups related to historical, functional, and ecological concepts. (Previous title: Ethnology of North American Indians)

SO 320 Sociological Theory 3c-0l-3sh
Prerequisites: SO151 and second-semester sophomore standing
Detailed survey of the historical development of sociological theory from the mid-19th century to the present. Treats the classical theorists Marx, Durkheim, and Weber, and such contemporary theoretical schools as functionalism, Marxian and Weberian conflict theory, cultural materialism, social evolutionism, rational choice theory, symbolic interactionism, ethnomethodology, sociobiology, structuralism, and postmodernism. Students are encouraged to take this course in the second semester of their sophomore year or during their junior year.

SO 333 Delinquency and Youth 3c-0l-3sh
Prerequisite: SO151
Study of social and cultural factors involved in various youth lifestyles, including delinquency. Cross-cultural and historical approach used in a review of social norms, social control, and socialization institutions and community-based programs for rehabilitation.

SO 335 Alcohol and Drug Abuse 3c-0l-3sh
Prerequisite: SO151
Examines the social issues and problems of alcohol and drug misuse in American society. Legal and illegal substances will be considered, and the causes of substance abuse as well as alternatives will be examined.

SO 336 Sociology of the Family 3c-0l-3sh
Prerequisite: SO151
Sociological study of the family from various theoretical viewpoints. Special emphasis will be placed on the contemporary American family. A variety of topics will be covered such as mate selection, power relationships and roles in the family, parent-child interaction, marital satisfaction, divorce, and others.

SO 337 World Societies and World Systems 3c-0l-3sh
Prerequisite: One of the following: AN110, EC101 or 121, GE230, HI202, PS101 or 282, SO151
Detailed analysis of the evolution of human societies, with special emphasis on the modern world system of societies that began to emerge in the 16th century and that has since expanded to include the entire globe. Topics include: societies during the preindustrial era; the emergence of modern capitalism in the 16th century; relations between developed and less developed societies in the modern world; the ascent and decline of nation-states in the modern world; the current plight of the Third World; the rise and demise of socialism in the 20th century; and various scenarios for the human future.

SO 339 The Community 3c-0l-3sh
Prerequisite: SO151
Analysis of the social structure of communities on the local level in relation to the national community structure. Examination of current problems and future trends.

SO 340 Sociology of Industry 3c-0l-3sh
Prerequisite: SO151
Examination of industrial organizations and their environments. Production systems analyzed in terms of different forms of organization, e.g., bureaucratic, power-equilibrium, and worker-participation. Special attention paid to who defines production, how such definitions are legitimized, and how constraints are placed on such definitions by union and other political organizations

SO 341 Sociology of Education 3c-0l-3sh
Prerequisite: SO151
Examines the place of education in society. Special attention to the development of education in America and its relation to political and economic phenomena. Some attention given to education in other industrial and agrarian societies

SO 342 Social and Cultural Aspects of Health and Medicine 3c-0l-3sh
Prerequisite: 6sh in Sociology or Anthropology
Review of the fields of medical sociology and anthropology. Focuses on such topics as health and illness in cross-cultural context, aging, social and psychological aspects of pain, and social organization of health facilities and services. Definitions of limits of "life" and "death" in context of holistic health.

SO 345 Interpersonal Dynamics 3c-0l-3sh
Prerequisite: SO151
Study of the interaction between and among individuals and groups in various social settings. Emphasis on self-understanding, small groups, socialization, social influence and compliance, person perception, collective behavior, and mass communication.

SO 348 Sociology of Work 3c-0l-3sh
Prerequisite: SO151
Focuses upon the sociological examination of the various forms of labor, employment, and unemployment present in industrial societies. Examines the nature of work and unemployment in the modern era and how these forms are being transformed in the present period.

SO 352 Sociology of Religion 3c-0l-3sh
Prerequisite: SO151
Nature, role, and function of religious phenomena in human societies will be explored with special attention to certain critical issues as they relate to religion and politics and religion and economics. Some fundamental modes of religious life including ritual forms and mythic expressions will be examined. Other themes such as revitalization movements and processes of secularization in modern societies will be included.

SO 357 Sociology of Aging 3c-0l-3sh
Prerequisite: SO151
Introduction to various problems faced in the process of growing older. Attitudes of society toward elderly and social and cultural impact of an aging U.S. population examined.

SO 361 Social Stratification 3c-0l-3sh
Prerequisite: SO151
Examines leading perspectives in the major sociological subfield of social stratification. Attention drawn to different ways of ranking people in human societies, issues concerning the distribution of income and wealth, the role of political power in determining who gets what, and the causes and consequences of social inequality for specific groups. (Offered as SO435 prior to 1993-4)

SO 362 Racial and Ethnic Minorities 3c-0l-3sh
Prerequisite: SO151
Examines from an historical and comparative perspective the experiences of minority groups with economic and political domination, stereotyping, prejudice, and discrimination. Techniques of majority group domination and the responses of minority groups are discussed. Various reasons are proposed for the different rates and patterns of assimilation and ethnic group success. (Offered as SO332 prior to 1993-4)

SO 363 Sociology of Sex and Gender 3c-0l-3sh
Prerequisite: SO151
Explores current perspectives on the situations faced by women and men, primarily in the United States. Examines issues such as the impact of sex and gender on socialization, the construction of knowledge, intimate relationships, paid work, family relationships, health, and issues of change. (Offered as SO354: Sexual Inequality in Human Societies prior to 1993-4)

SO 380 Social Research Methods 3c-0l-3sh
Prerequisites: 9sh in sociology and junior standing
Examines diverse research designs used in the social sciences, i.e., survey, field study, experiment, documentary, and existing statistical data. Focuses both on logic and practice of social research. Students choose a number of mini-projects or a major research project. (Offered as SO455 prior to 1993-4)

SO 421 Sociology of Mass Media 3c-0l-3sh
Prerequisite: SO151
Examines the development of mass media as dominant cultural forms within advanced industrial societies in the 20th century. Emphasizes critical understanding of the sociohistorical development, the underlying assumptions, and the social implications of the advance of mass media.

SO 427 Spouse Abuse 3c-0l-3sh
Prerequisite: SO151
Considers the range of theoretical explanations for the pervasive violence between husband and wife. Particularly examines the research on wife battering and the implications of this research for programs and policies assisting both the victim and the abuser.

SO 428 Child Abuse 3c-0l-3sh
Prerequisite: SO151
Examines the prevalence, causes, and social implications of physical, sexual, emotional, and neglect forms of child abuse in society. Child abuse will be studied from the individual, family, and societal level perspectives. Potential intervention strategies will also be considered.

SO 448 Social Policy 3c-0l-3sh
Prerequisite: SO151
Current social policy issues and debates in the United States between conservative, liberal, and social democratic policy analysts, with special emphasis on various social problems and a range of policies designed to ameliorate the economic disadvantages of single individuals, single parents, and two-parent families. Attention given to the formation of social welfare programs in the United States and alternatives offered by Western European social welfare states. Also devoted to understanding the relationship between social policy, research, and implementation.

SO 456 Field Research Methods 3c-0l-3sh
Prerequisite: SO455 or permission
Examination of methods and practice of sociology and anthropology in the areas of qualitative and field methods. Concentrates upon the development of field notes, interviewing techniques, participant observation, etc. Qualitative methods of sampling and analysis will include theoretical sampling and analytic induction. Brief background research into community, organizational, and group structure will also be emphasized.

SO 457 Computer Use in Sociology 3c-0l-3sh
Prerequisite: Permission of the instructor
Introduces students to use of microcomputers in social science research and practice. Uses a variety of software for clinical sociological applications as well as quantitative analysis of social scientific data. These include client information systems, field notes and downloading such notes, exchanging information between agencies, and statistical analyses for program evaluation and forecasting.

SO 458 Political Sociology 3c-0l-3sh
Prerequisite: SO151
Examination of the social context of power and politics, with special reference to such topics as: who controls the state and state policy; the role of the state in stabilizing capitalism and protecting the power of the upper class; political activities of the middle and upper classes; and labor, civil rights, and welfare rights social movements in America. Especially considers the problems of conducting and implementing social policy research for social change. Cross-listed in Political Science as PS346: Political Sociology.

SO 459 Development of Social Services 3c-0l-3sh
Prerequisite: Permission of the instructor
Examination of ideological and institutional conditions which shape health, unemployment, social security, and welfare services.

SO 480 Sociology Seminar var-1-3sh
Prerequisite: SO151
Seminar for advanced students devoted to an intensive analysis of specialized issues within the discipline.

SO 481 Special Topics in Sociology 3c-0l-3sh
Prerequisite: SO151
Focuses on special topics in sociology which are not included in regular course offerings.

SO 482 Independent Study var-1-3sh
Prerequisite: Permission of the instructor
An opportunity for students to engage in an in-depth analysis of some topic through consultation with a faculty member. A semester project ordinarily expected.

SO 483 Readings in Sociology var-1-3sh
Prerequisite: SO151
Directed readings on special topics in sociology.

SO 493 Internship in Sociology var-3-12sh
Prerequisite: Permission of the instructor
Supervised experience in public or private organizations that extends and complements coursework at the university.

SP: Spanish
Department of Spanish and Classical Languages
College of Humanities and Social Sciences

SP 101 Elementary Spanish I 4c-1l-4sh
For beginning students. Primary emphasis is on aural/oral skills. Students will learn to converse and ask questions in simple present time and become acquainted with location of Hispanic populations and elements of their daily lives. Attendance is required.

SP 102 Elementary Spanish II 4c-1l-4sh
A continuation of SP101. Students will learn to express past and future time. They will continue to learn about Hispanic countries and their cultures. Attendance is required.

SP 111 Intensive Elementary Spanish var-6sh
Student completes sequence in one semester (6sh). Using Dartmouth Intensive Language Model (DILM), sections emphasize mastery of spoken language as well as basic language skills. Classes are 45 minutes each; drill sessions are 40 minutes each and meet Monday through Friday.

SP 201 Intermediate Spanish 4c-1l-4sh
Prerequisite: SP102 or equivalent
A continuation of previous work on listening, speaking, reading, and writing skills. Students will learn to function in everyday situations, expressing opinions and doubts, and narrating and describing in present, past, and future time. Exposure to cultural concepts through literary readings. Liberal Studies credit is given.

SP 211 Intensive Intermediate Spanish var-6sh
Student completes sequence in one semester(6 sh). Using Dartmouth Intensive Language Model(DILM), students develop language skills with emphasis on oral competency. Classes are 45 minutes each; drill sessions are 40 minutes each and meet Monday through Friday.

SP 221 Intermediate Spanish Conversation 3c-0l-3sh
Prerequisite: SP201 or equivalent
Intensive work on oral communication skills with emphasis on vocabulary building, pronunciation, and discourse strategies. Required for all majors and minors. [Replaced SP221/222]

SP 222 Intermediate Spanish Conversation-Business 3c-0l-3sh
Prerequisite: SP201 or equivalent
Same as SP221 but with a special emphasis on the vocabulary and structures used in the business world. Substitutes for SP221.

SP 223 Intermediate Spanish Conversation-Criminology 3c-0l-3sh
Prerequisite: SP201 or equivalent
Same as SP221 but with a special emphasis on the vocabulary and structures used in law enforcement and criminal justice. Substitutes for SP221.

SP 230 Intermediate Spanish Composition 3c-0l-3sh
Prerequisite: SP201 or equivalent
Intensive practice in written expression in Spanish. Both communicative and structural skills are stressed. Taught in Spanish. Required for all majors and minors. This course is approved to meet the Liberal Studies requirement for a writing-intensive course for majors. [Replaced SP351]

SP 260 Introduction to Hispanic Literature 3c-0l-3sh
Prerequisite: SP201 or equivalent
This course is a prerequisite for any 300- or 400-level course in Hispanic literatures. Designed to provide students with the tools necessary for developing literary competence, the course combines a study of literary genres and analysis with an introduction to the literatures of Spain and Spanish America. Taught in Spanish. Required for all majors and minors.

SP 290 Intensive Spanish for Elementary Teaching 6c-0l-6sh
Prerequisite: SP251/252 or new SP201 or equivalent oral proficiency rating. Permission of coordinator of Foreign Languages and International Studies for Elementary Teaching (FLISET) Program. For students enrolled in the FLISET program only.
The student will develop language skills by means of an intensive five-week summer immersion experience. Strong emphasis is placed on strengthening oral language skills and reading. In addition to classroom instruction, the student will benefit from a full-immersion atmosphere, including extensive opportunities for using Spanish in informal settings and conversing with native Spanish speakers. The language is presented by means of functional language tasks and vocabulary which reflect the content area of the elementary curriculum. (Student must take this course during the summer following the sophomore year.)

SP 321 Advanced Spanish Conversation 3c-0l-3sh
Prerequisite: SP221 or equivalent
Extensive practice in oral communication skills. Emphasis is placed on developing fluency in speaking over a wide range of topic areas. Required for all majors and minors. [Replaced SP321/322]

SP 340 Hispanic Civilization through the 19th Century 3c-0l-3sh
An introduction to the significant aspects of the culture of both Spain and Spanish America. Elements for explanation and discussion are drawn from artistic, literary, religious, geographic, social, and political manifestations of Hispanic culture as these have revealed themselves through the 19th century. Taught in Spanish. Required for all majors and minors. [Not for credit after prior SP361 or SP363]

SP 342 Twentieth-Century Spanish Civilization and Culture 3c-0l-3sh
An analysis of the major cultural trends in 20th-century Spain as they relate to its current problems, aspirations, and values. Elements for explanation and discussion are drawn from artistic, literary, religious, geographic, social, and political manifestations. Taught in Spanish; offered alternate years. [May not duplicate credit for SP382 taken in Valladolid]

SP 344 Twentieth-Century Spanish-American Civilization and Culture 3c-0l-3sh
An analysis of the major cultural trends in 20th-century Spanish America as they relate to its position in the world. Elements for explanation and discussion are drawn from artistic, literary, religious, geographic, social, and political manifestations including indigenous cultural influences. Taught in Spanish; offered alternate years. [Not for credit after prior SP364]

SP 353 Spanish Phonetics and Phonemics 3c-0l-3sh
An introduction to the phonological study of the sounds and training in pronunciation. The student will learn the theoretical basis for understanding the Spanish sound system and will perfect pronunciation through classroom practice and tapings. The course is taught in Spanish. Required for Spanish Education majors; highly suggested for Spanish majors.

SP 354 Commercial Spanish 3c-0l-3sh
Prerequisite: SP230 or equivalent
Designed especially for majors in Spanish for International Trade, this course has three focuses: it teaches students how to do business communications in Spanish; it teaches the vocabulary necessary for dealing with all aspects of trade and commerce; and it introduces students to the special concerns and practices of business in the Spanish-speaking world. Taught in Spanish. [Not for credit after prior SP254]

SP 362 Survey of Peninsular Literature 3c-0l-3sh
Prerequisite: SP260 or permission
A course designed to introduce students to a careful and critical reading of literary texts from Spain read either in their entirety or in select passages. Taught in Spanish; offered alternate years.

SP 364 Survey of Spanish-American Literature 3c-0l-3sh
Prerequisite: SP260 or permission
A course designed to introduce students to a careful and critical reading of Spanish-American literary texts read either in their entirety or in select passages. Taught in Spanish; offered alternate years. [Not for credit after SP376]

SP 382-389 Pennsylvania-Valladolid Program 18sh
Contact chairperson, Department of Spanish and Classical Languages. Courses taken in Valladolid include the following and SP482: Independent Study (3sh). Descriptions below.

SP 382 Contemporary Spain 3sh
Gives the student a general view of Spain today in the areas of society, economy, and political institutions. [See SP342]

SP 383 Geography and History of Spain 3sh
Students will be introduced to a panorama of Spanish physical, social, and

economic geography including the recent autonomic division of the country and the communication among the autonomies. Students will also review the history of Spain from the 15th century to the present with special emphasis on today's Spanish institutions.

SP 384 History of Spanish Art 3sh
Students will be exposed to the richness of art in the Iberian Peninsula and in particular in the area of Madrid and Castilla-Leon. They will study the evolution of Spanish art in history, giving more emphasis to contemporary tendencies.

SP 385 Survey of Spanish Literature 3sh
Students will be introduced to a general study of Spanish literature from its origin to the present time. Students will learn to appreciate and analyze the different literary genres. Emphasis will be placed on 20th-century literature.

SP 389 Theory and Practice of Spanish Language 3sh
Students will be introduced to Spanish syntax, morphology, and the Spanish language lexicon. They will be introduced to familiar and formal conversation and to idiomatic expressions used in everyday situations.

SP 390 Teaching of Elementary Content through the Spanish Language 3c-0l-3sh
Prerequisites: Successful completion of SP290; passage of a language proficiency examination and permission of the instructor
The student will study current theories of language acquisition processes in children and will develop foreign language instructional objectives and activities which integrate language and cultural learning with the content areas of the elementary school curriculum. Through hands-on practice, the student will develop techniques for teaching functional language, planning lessons, testing language skills, setting curricular objectives, and selecting/designing materials appropriate to the needs and interests of elementary school foreign language learners. [Prior to 1989 was titled Spanish in the Elementary School]

SP 400 History of the Spanish Language 3c-0l-3sh
Traces phonological, morphological, lexical, and syntactical evolution of Castilian dialect from its origins in vulgar Latin through its development, perfection, and ultimate recognition as the official language of Spain and Spanish America. Places Castilian linguistically with relation to other Romance languages and considers features peculiar to Spanish of Latin America. Taught in Spanish; offered alternate years.

SP 402 Translation and Interpretation 3c-0l-3sh
Fundamental translation skills for use in business and industry as well as in academic and popular fields. Offered alternate years.

SP 403 Applied Linguistics 3c-0l-3sh
Prerequisite: SP230
An introduction to Spanish linguistics for students who have had no previous experience in linguistics. Students will study the application of areas such as phonology, morphology, syntax, and semantics and will explore issues in psycholinguistics and sociolinguistics. Taught in Spanish.

SP 404 Advanced Spanish Grammar 3c-0l-3sh
Prerequisites: SP221 or equivalent and SP230 and senior standing or departmental permission
An in-depth study of Spanish syntax and morphology. Taught in Spanish. Required for all majors.

SP 410 Medieval Literature 3c-0l-3sh
Prerequisite: SP260 or permission
Reading and discussion of various medieval genres: brief prose narrative, epic, lyric and didactic poetry, prose, and medieval drama. Taught in Spanish; offered in four-year rotation.

SP 411 Golden Age Literature 3c-0l-3sh
Prerequisite: SP260 or permission
Analysis of themes, motifs, and stylistic devices of Spanish poetry, novel, and theater of the Renaissance and Baroque. Taught in Spanish; offered in four-year rotation.

SP 412 The Spanish Novel of the 19th and 20th Centuries 3c-0l-3sh
Prerequisite: SP260 or permission
Analysis of selected novels from three major periods: the 19th century, the Generation of 1898, and the post Civil War. Taught in Spanish; offered in four-year rotation. [Not for credit after prior SP371]

SP 413 Spanish Poetry of the 19th and 20th Centuries 3c-0l-3sh
Prerequisite: SP260 or permission
Study and analysis of lyric poetry in Spain from 19th-century poetry through modernism and its evolution to the present. Taught in Spanish; offered in four-year rotation

SP 420 Modern Hispanic Theater 3c-0l-3sh
Prerequisite: SP260 or permission
Study and analysis of modern dramatic works from Spain and Spanish America. Particular emphasis will be given to the representational aspect of the works. Taught in Spanish; offered in four-year rotation.

SP 421 Modern Hispanic Short Story 3c-0l-3sh
Prerequisite: SP260 or permission
The critical analysis of short stories by Spanish and Spanish-American authors. Taught in Spanish; offered in four-year rotation.

SP 430 Twentieth-Century Spanish-American Prose 3c-0l-3sh
Prerequisite: SP260 or permission
Traces literary expressions from the turn of the century to the present in the major prose expressions of the essay, the short story, and the novel. Taught in Spanish; offered in four-year rotation.

SP 431 Spanish-American Poetry 3c-0l-3sh
Prerequisite: SP260 or permission
A study of Spanish American poetry from its early manifestations through modernism, post-modernism, and avant-garde. Taught in Spanish; offered in four-year rotation.

SP 481 Special Topics 3c-0l-3sh
Designed to meet special needs of a student group.

SP 482 Independent Study var-1-6sh
An opportunity to engage in an in-depth analysis of some topic dealing with the Spanish language and culture through consultation with a faculty member. Permission required.

SP 493 Internship var-3-12sh
Prerequisite: One semester of study in a Spanish-speaking country
A supervised field experience in any Spanish-speaking area of the world with approved public agencies and institutions or private firms, no longer than one semester and no less than one month. Positions will be matched as closely as possible with the intern's personal interests and professional goals. For more information contact the Spanish and Classical Languages Department. Maximum of 6 credits can apply toward a major.

SW: Social Work
Department of Sociology
College of Humanities and Social Sciences

SW 238 Introduction to Social Work 3c-0l-3sh
Prerequisite: SO151 or AN110
Introduction to the dynamics of helping relationships.

TH: Theater
Department of Theater
College of Fine Arts

TH 101 Introduction to Theater 3c-0l-3sh
An exploration of the theater arts, examining major periods of theater history, selected works of dramatic literature, and the primary theater arts of acting, directing, design, and technical theater. Class experience includes the analysis of at least two major works of drama, attending two live productions, and viewing of selected televised plays and musicals.

TH 110 Script Analysis 3c-0l-3sh
Course examines major as well as alternative systems by which dramatic texts may be analyzed, including classical plot construction, scene structure, tension and release, dramatic rhythms, and several contemporary and less conventional methods of dramatic orchestration.

TH 115 Principles of Theater Design and Architecture 3c-0l-3sh
Surveys principal architectural forms, style, and periods, providing a visual history of theatrical architecture and scenic design. Basic design principles will also be incorporated.

TH 120 Stagecraft I 3c-0l-3sh
Exploration of the material, methods, and procedures utilized in creating a scenic environment. Through instruction and practical application, students learn the basis of scenic instruction and develop competency with the basic materials and equipment used in a theatrical scene shop.

TH 122 Costume Workshop 3c-0l-3sh
Instruction and practical experience in the process of building costumes for the stage. Activities include fitting, cutting, sewing, dyeing, and painting. There is also instruction in the maintenance of wardrobe, costume stock, materials, and properties.

TH 130 Stage Voice I 3c-0l-3sh
Instruction in basic development of the vocal instrument of the actor in performance. Emphasis is placed upon the resonance, quality, pitch, and projection of the voice while perfecting the student's ability to articulate.

TH 131 Stage Movement I 3c-0l-3sh
Instruction in basic stage movement and the physicalization of character. Includes work in character development through variety in movement, basic commedia technique, and the assessment, awareness, and correction of individual movement problems.

TH 201 Theater History I 3c-0l-3sh
A comprehensive survey of the history, trends, and developments of theatre and drama from their beginnings through the English Renaissance.

TH 202 Theater History II 3c-0l-3sh
Comprehensive survey of the history, trends, and developments of theatre and drama from the English Restoration to the present.

TH 220 Stagecraft II 3c-0l-3sh
Prerequisite: TH120 or permission
Advanced exploration of materials, methods, and procedures involved in creating scenic environment. Students also receive intensive practical experience in shop planning and supervision to include problem-solving techniques.

TH 221 Basic Stage Lighting 3c-0l-3sh
Prerequisite: TH120
Introduction to lighting instruments, color media, control boards, physical laws of electricity and optics, graphics, and conventional techniques used in lighting theatrical productions.

TH 223 Make-up for the Stage 3c-0l-3sh
Deals with practical application of straight and character make-up and may include instruction in creating beards, wigs, prosthetics, and masks.

TH 240 Acting I 3c-0l-3sh
Study of the primary elements of the Stanislavski system of character development. Includes text analysis and the development of physical action through a character's subtext, as well as motivational and improvisational techniques.

TH 301 Tragic Mask 3c-0l-3sh
Historical survey of theatrical conventions, traditions, and production practices specifically associated with tragedy and its ensuing forms, drama and melodrama. It focuses on landmark dramatic texts, examining the changing faces of tragic masks and their implications for theatrical practice from ancient Greece to the 20th century.

TH 302 Comic Mask 3c-0l-3sh
Historical survey of theatrical conventions, traditions, and production practices specifically associated with comedy and its related forms: farce, burlesque, etc. Focuses on landmark dramatic texts, examining the changing faces of comic masks and their conventions and their implications for theatrical practice from ancient Greece to the 20th century.

TH 310 Theater Criticism 3c-0l-3sh
A study of the theory and criticism and of the discrete functions of critic and reviewer. Students see live performances and practice writing both reviews and criticism.

TH 320 Scene Design 3c-0l-3sh
Prerequisite: TH120
An introduction to the principles of scenic composition, analysis, concept development, and graphic communication methods used by the scenographer.

TH 321 Stage Lighting Design 3c-0l-3sh
Prerequisite: TH221
Covers the design and execution of stage lighting with emphasis on script analysis, the collaborative role of the lighting designer, lighting theory, and modern stage lighting practices. Practical applications include the conceptualization and designing of production lighting for Proscenium, Thrust, and Arena stages through class exercises.

TH 322 Costume Design 3c-0l-3sh
Prerequisite: TH122
Covers design and execution of stage costumes with emphasis on showing how mood and illusion can be created through the proper selection of style, color, and texture, supplemented by an overview of stage costuming.

TH 330 Stage Voice II 3c-0l-3sh
Prerequisite: TH130
Advanced voice training for the actor with particular emphasis on stage dialects and verse drama.

TH 331 Stage Movement II 3c-0l-3sh
Prerequisite: TH131
Instruction in advanced physicalization of character and specialized stage movement. Included will be advanced work in character development through movement, group movement, stage combat, physical comedy, and introductory mime and/or mask training.

TH 340 Acting II 3c-0l-3sh
Prerequisites: TH240, 131, 130
Study and practice of acting skills with special emphasis on style and period.

TH 350 Directing 3c-0l-3sh
Prerequisites: TH110, TH240, permission
Introduction to basic directing skills: casting, floor plans, blocking, rehearsal procedures, and the applications of scene and character analysis. Students will prepare short scenes for class presentation.

TH 481 Special Topics var-1-6sh

TH 482 Independent Study var-1-6sh
Prerequisite: Permission
Independent study in theater may be either purely academic or may be a practical production project, supported by a written document giving evidence of significant scholarly investigation or original, creative effort. May be repeated for a maximum of 6 credits.

TH 483 Acting Studio 3c-2l-3sh
Prerequisites: TH240, permission
Studio course offering scene practice with faculty direction, coaching, and criticism. Specific type of scene work varies from semester to semester. May be repeated.

TH 484 Directing Studio 3c-2l-3sh
Prerequisites: TH350, permission
Opportunity for students to direct scene work, one-act plays, or larger projects, according to individual levels of experience, preparation, and readiness. Practical application of principles of directing to specific problems in directing. Student projects performed in public, open-class recitals. May be repeated.

TH 486 Practicum in Production var-.5-4sh
Prerequisite: Permission
An opportunity with academic credit for students to make significant contributions to campus productions augmenting theater coursework in the areas of assistant directing or directing, stage management, technical direction, sound design, lighting, costuming, scene design, properties and set decoration, scene building and painting, and make-up design. May be repeated. (Revision pending on credit starting at .5sh and requirement of eight semesters)

TH 489 Technical Theater Problems 3c-0l-3sh
Prerequisite: Permission of instructor
Open to all students desiring instruction in a variety of technical theater areas not presently covered in other courses. Topics to include sound design, stage management, set props, media make-up, technical drawing/mixed media, and scene painting. May be repeated.

TH 493 Internship var-3-12sh

UN: Universitywide Courses
Academic Affairs Division

UN 480 T.H.I.S. Seminar 3c-0l-3sh
Academic seminar taken at the SSHE University Center in Harrisburg in conjunction with the T.H.I.S. internship. Consists of public policy information, decision making, and budgeting and addresses question-and-answer sessions with leading state government policymakers. See descriptions under Academic Affairs areas. Restricted to the T.H.I.S. internship participant. See UN493.

UN 493 T.H.I.S. Internship var-12sh
Practical experience at the policymaking level of the state government that also requires a research project. Student must have a 3.0 GPA and submit a sample of writing skills with the application to the Experiential Education Office. Open to any IUP major. See description under Academic Affairs areas. Concurrent seminar course required. See UN 480.

VO: Vocational Education
Center for Vocational-Technical Personnel Preparation
College of Education

VO 010 Industrial Electrical Technology var-1-18sh
Prerequisite: Center/department permission
Emphasis on comprehensive industrial electrical technology through training in specialty concentrations applied to design, development, and testing of electrical circuits, devices, and systems for generating electricity and the distribution and utilization of electrical power. Carries institutional credit only.

VO 100 Preparation of the Vocational Professional I var-1-15sh
Personalized, self-paced vocational teacher preparation. The vocational student/intern develops, demonstrates, and documents competence in selected pedagogical competencies. Individualized instruction is supplemented with monthly seminars. Self-evaluation is encouraged in the program, utilizing videotape equipment and the feedback from a team of professional teacher educators.

VO 395 Vocational Education Writing Experience var-0sh
This course number documents that within VO100/VO400, a student has completed modules that include writing equivalent to one writing-intesive course.

VO 400 Preparation of the Vocational Professional II var-1-15sh
Prerequisite: Successful completion of VO100
Personalized, self-paced vocational teacher preparation. The vocational student/intern develops, demonstrates, and documents competence in selected teaching skills in the areas of program planning, program development, program evaluation, and managing and evaluating instruction in a vocational school setting. Self-evaluation is encouraged in the program utilizing videotape equipment and the feedback from a team of professional teacher educators.

VO 401 Special Topics in Vocational Technical Preparation var-1-12sh
Prerequisite: Center permission
Provides opportunities for vocational students/interns to develop additional technical skills in areas related to their occupational competence under professional supervision. Topics are determined through individual counseling, through priority needs identified by advisory committees, and through evaluation of technical competence by center teaching staff.

VO 402 Special Topics in Vocational Pedagogical Preparation var-1-15sh
Prerequisite: Center permission
Provides opportunities for vocational students/interns to develop additional teaching skills under professional supervision. Topics are determined through identification of priority areas in vocational education using national and state surveys.

VO 450 Technical Preparation of the Vocational Professional 24sh
Competency assessment of occupational experience through national standardized written and performance examinations.

WS: Women's Studies
Women's Studies Program
Academic Affairs Division

WS 200 Introduction to Women's Studies 3c-0l-3sh
Focuses on women as they are and as they have been—as represented by the work of writers and as presented in the theory and research of various disciplines. Historical and contemporary images of women are examined in terms of their impact on our lives. The relationships of women to social institutions such as education, religion, and health care are explored. Alternative theories explaining the roles and status of women are compared. Attempts to help us understand the choices and experiences women face in their everyday personal, work, and public lives.

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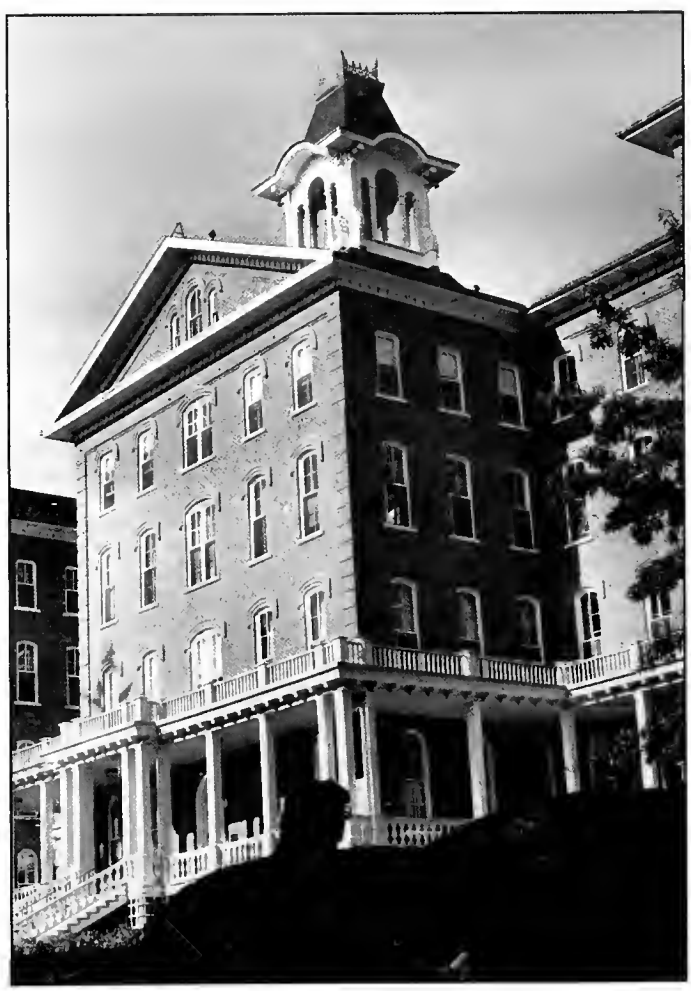

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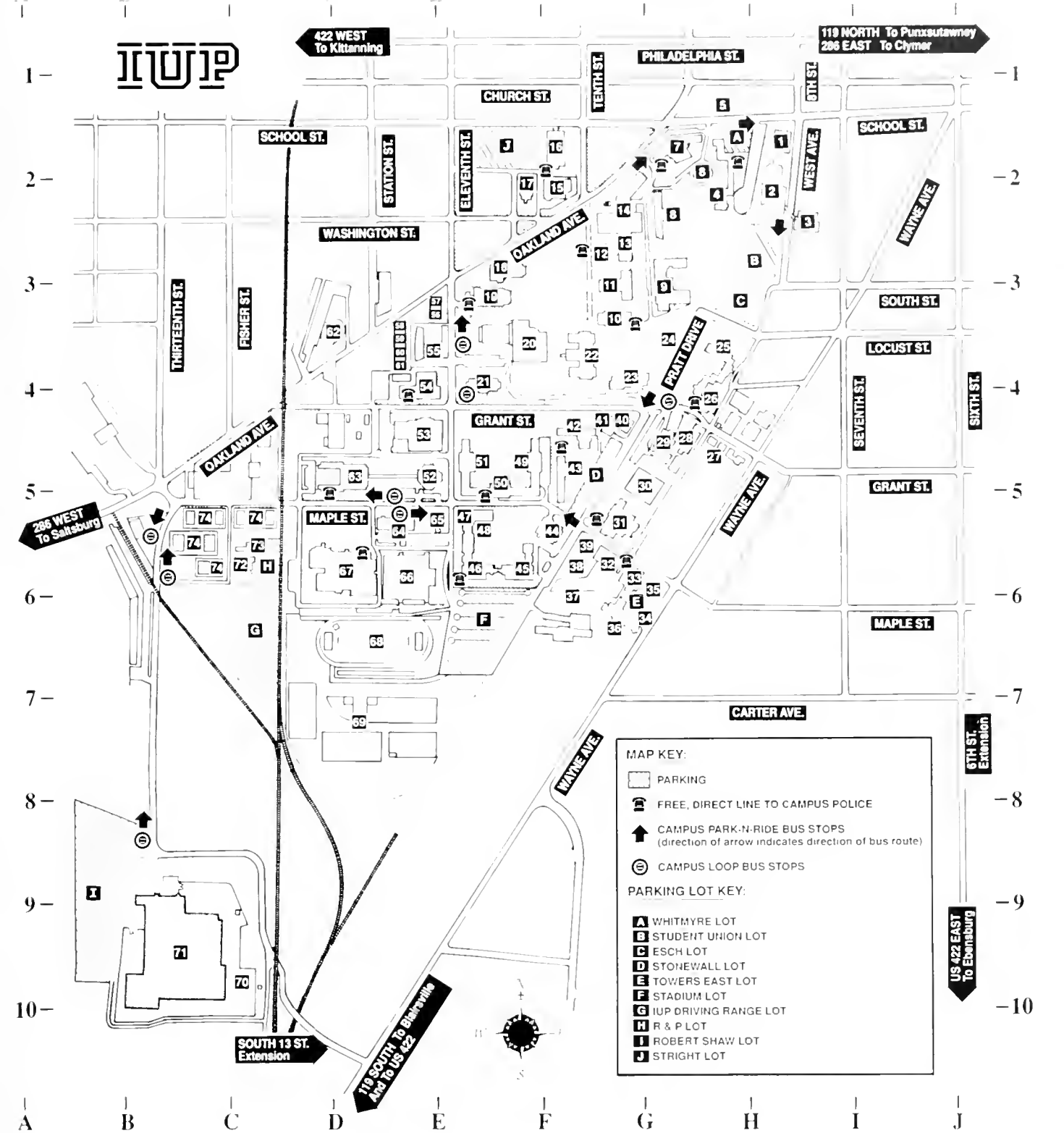

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ACKERMAN HALL *	G 4
ADMINISTRATIVE ANNEX *	G 4
ATHLETIC FIELDS *	D-7
BOILER PLANT	G 4
BOOK STORE *	H 2
BREEZEDALE ALUMNI CTR *	H 2
CAMPUS TOWERS	G 6
CIVIL DEFENSE CENTER	E 5
CLARK HALL *	E 4
COGSWELL HALL *	E 4
CO OP RECREATION BLDG *	I 2
DAVIS HALL *	E 5
EICHER HALL *	G 4
ELKIN HALL *	G 2
ESCH HALL *	H 4
FISHER AUDITORIUM *	E 3
FLAGSTONE THEATER	G 3
FOLGER DINING HALL *	G 5
FOSTER DINING HALL *	E 4
GORDON HALL *	G 2
GREENHOUSE	G 4
HILL HOUSE	E 3
HOSAC HOUSE	E 3
JOHNSON HALL *	F 2
KEITH HALL *	G 3
LANGHAM HALL *	F 5
LAWRENCE HALL *	E 6
LEONARD HALL *	G 3
LEWIS HOUSE	E 3
LUTHERAN CAMPUS CENTER	H 1
MACK HALL	E 5
MAINTENANCE GARAGE	C 9
MCCARTHY HALL	G 6
MCELHANEY HALL *	G 3
MCFARLAND HOUSE	E 3
MEMORIAL FIELD HOUSE *	E 6
MILLER STADIUM *	E 6
NEWMAN CENTER *	D 3
PECHAN HEALTH CENTER *	F 5
PIERCE HALL *	E 5
POLICE ACADEMY *	G 6
POST OFFICE *	G 5
521 PRATT DRIVE	F 5
525 PRATT DRIVE	F 6
529 PRATT DRIVE	F 6
PRATT HALL *	H 2
PRINTING CENTER *	G 5
R & P OFFICE BUILDING *	C 6
R & P LAB BUILDING	C 5
RESCHINI HOUSE *	E 5
RICHARDS HOUSE	E 4
ROBERTSHAW AUX BLDG	C 10
ROBERTSHAW BUILDING *	B 9
S W JACK COGEN PLANT	G 5
SCRANTON HALL *	E 5
SHAFER HALL *	F 6
SPROWLS HALL *	E 4
STANLEY HOUSE	E 4
STAPLETON LIBRARY *	F 3
STEWART HALL	F 5
STUDENT UNION *	H 2
STOUFFER HALL *	D 5
STRIGHT HALL *	F 2
JOHN SUTTON HALL *	F 4
TENNIS COURTS	C 5 C 6
TURNBULL HALL	F 5
UHLER HALL	F 2
UNITED MINISTRY	H 5
UNIVERSITY WAREHOUSE	C 9
UNIVERSITY TOWERS *	G 6
WAHR HALL	F 4
WALLACE HALL *	H 4
WALLER HALL *	F 3
WALSH HALL *	G 3
WEYANDT HALL *	G 2
WHITMYRE HALL	H 2
WILSON HALL	G 3
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